Annual high-resolution grazing intensity maps on the Qinghai-Tibet Plateau from 1990 to 2020

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Abstract. Grazing activities constitute the paramount challenge to grassland conservation over the Qinghai-Tibet Plateau (QTP), underscoring the urgency for obtaining detailed extent, patterns, and trends of grazing information to access efficient grassland management and sustainable development. Here, to inform these issues, we provided the first annual Gridded Dataset of Grazing Intensity maps (GDGI) with a resolution of 100 meters from 1990 to 2020 for the QTP. Five most commonly used machine learning algorithms were leveraged to develop livestock spatialization model, which spatially disaggregate the livestock census data at the county level into a detailed 100 m× 100 m grid, based on seven key predictors from terrain, climate, vegetation~~land cover~~ and socio-economic~~socioeconomic~~ factors. Among these algorithms, the extreme trees (ET) model performed the best in representing the complex nonlinear relationship between various environmental factors and livestock intensity, with an average absolute error of just 0.081 SU/hm^2, a rate outperforming the other models by 21.58%~414.60%. By using the ET model, we further generated the GDGI dataset for the QTP to reveal the spatio-temporal heterogeneity and variation in grazing intensities. The GDGI indicates grazing intensity remained high and largely stable from 1990 to 1997, followed by a sharp decline from 1997 to 2001~~decreased from 1990 to 2001 period~~, and fluctuated thereafter. Encouragingly, comparing with other open-access datasets for grazing distribution on the QTP, the GDGI has the highest accuracy, with the determinant coefficient (R^2) exceed 0.8. Given its high resolution, recentness and robustness, we believe that the GDGI dataset can significantly enhance understanding of the substantial threats to grasslands emanating from overgrazing activities. Furthermore, the GDGI product holds considerable potential as a foundational source for other researches, facilitating rational utilization of grasslands, refined environmental impact assessments, and the sustainable development of animal husbandry. The GDGI product developed in this study is available at https://doi.org/10.5281/zenodo.10851119 (~~https://figshare.com/s/ad2bbc7117a56d4fd88d (~~Zhou et al., 2024~~)3~~).

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1 Introduction

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Livestock is a crucial contributor to global food systems through the provision of essential animal proteins and fats, and plays a significant role in supporting human survival and socio-economic development (Gilbert et al., 2018; Godfray et al., 2018; Humpenöder et al., 2022; Kumar et al., 2022). However, the escalating increase in human demand for meat and dairy products over recent decades has triggered a livestock boom, which in turn has increasingly threatened grassland ecosystems and placed a heavy burden on the environment through overgrazing and land-use change (Tabassum et al., 2016; Wei et al., 2022; Minoofar et al., 2023)~~(Tabassum et al., 2016, Wei et al., 2022, Minoofar et al., 2023)~~. It is estimated that up to 300 million hectares of land are used globally for grazing and cultivating fodder crops (Tabassum et al., 2016)~~(Tabassum et al., 2016)~~. Grazing activities could alter vegetation phenology and community structure (Dong et al., 2020), and trigger deforestation (García-Ruiz et al., 2020), grassland degradation (Sun et al., 2020), soil erosion (Shakoor et al., 2021), and associated direct releases in greenhouse gas that lead to climate change feedback (Godfray et al., 2018; Chang et al., 2021). Additionally, livestock are responsible for large-scale dispersion of pathogens, organic matter, and residual medications into soil and groundwater, thereby contaminating the environment (Venglovsky et al., 2009; Tabassum et al., 2016; Hu et al., 2017; Muloi et al., 2022). Consequently, more and more scholars have called attention to provide reliable contemporary dataset to illustrate the spatio-temporal heterogeneity and variation of livestock (Petz et al., 2014; Fetzel et al., 2017; Zhang et al., 2018; Li et al., 2021).

One of the major challenges in monitoring grazing activity at regional or even larger scale, is the determination of the livestock distribution pattern. Despite the importance of geographical grazing information, high spatio-temproal grazing dataset remain unavailable, posing the most critical challenge to grassland management, particularly for vulnerable grassland ecosystems in fragile regions grappling with economic and sustainable development contradictions (~~Meng et al., 2023;~~ Miao et al., 2020; Pozo et al., 2021; ~~Miao et al., 2020;~~ He et al., 2022; Meng et al., 2023). In the early 2000s, the Food and Agriculture Organization of the United Nations (FAO) launched the Gridded Livestock of the World (GLW) project to facilitate a detailed evaluation of livestock production, aiming to provide pixel-scale livestock densities instead of traditional administrative unit benchmarks (Nicolas et al., 2016). Consequently, the world's inaugural dataset of livestock spatialization map (GLW1) was released in 2007, providing the first globally standardized livestock density distribution map at a spatial resolution of 0.05 decimal degrees (≈5 km at the equator) for 2002. It was not until 2014 that an updated GLW2 map with a 1 km resolution for 2006 was released, by using a stratified regression approach, superior spatial resolution predictor variables, and more detailed livestock census data (Robinson et al., 2014).~~(Robinson et al., 2014).~~ Furthermore, an evolutionary step in machine learning technology saw Gilbert et al. (2018) using random forests algorithms to forge a global livestock distribution map with a 10-km resolution for 2010 (GLW3), succeeding traditional multivariate regression methods and surpassing the precision of previous GLW1 and GLW2 maps. Beyond these global mappings, several maps with different scales have also been published, including intercontinental, national, state or provincial, and local scale (Neumann et al., 2009; Prosser et al., 2011; Van Boeckel et al., 2011; Nicolas et al., 2016). However, these maps are fundamentally coarse due to constraints such as the availability of

fine scale and contemporary census data, the grazing spatialization method, as well as the identification of appropriate indicators, thereby limiting their application to local or regional-scale studies (Robinson et al., 2014; Nicolas et al., 2016; Gilbert et al., 2018~~; Robinson et al., 2014~~). Hence, there is an emergent demand for more refined grazing map products (Mulligan et al., 2020; Martinuzzi et al., 2021).

An exemplar of this need can be observed in the Qinghai-Tibet Plateau (QTP), the world's most elevated pastoral region and an important grazing area in China (Zhan et al., 2023). It was possessing abundant grassland that spans 1.5 million km^2, accounting for 50.43% of China's total grassland area, with Yak and Tibetan sheep as primary grazing livestock (Feng et al., 2009; Cai et al., 2014; Zhan et al., 2023). Over recent decades, the QTP has undergone escalating grassland degradation, leading to many ecological and socio-economic problems, which calls for an urgent need for detailed livestock distribution dataset (Li et al., 2022a). Unfortunately, despite researchers' efforts at mapping the QTP's grazing intensity, current livestock dataset still suffer from coarse spatio-temporal resolution and modelling accuracy. Apart from the aforementioned global grazing dataset, several other maps also cover the QTP. For instance, Liu et al. (2021) generated ~~an~~ annual 250-m gridded carrying capacity maps for 2000-2019, by employing multiple linear regressions of livestock numbers, population density, NPP, and topographic features. Li et al. (2021) used machine learning algorithms to produce gridded livestock distribution data at 1 km resolution for 2000-2015 in western China at five year interval, based on county-level livestock census data and 13 factors from land use practice, topography, climate, and socioeconomic aspects, including grassland coverage, arable land coverage, forest land coverage, desert coverage, NDVI, elevation, slope, daytime surface temperature, precipitation, distance to river, travel time to major cities, population density, and GDP~~NDVI, topography, climate, and population density~~ (Li et al., 2021). A contribution from Meng et al. (2023) brought forth annual longer time-series grazing maps by using ~~a~~ random forests model, integrating climate, soil, NDVI, water distance, and settlement density to decompose county-level livestock census data to a 0.083° (≈10 km at the equator) grid for 1982-2015 (Meng et al., 2023). Similarly, Zhan et al. (2023) also used ~~a~~ random forests algorithm to combine eleven influence factors to provide a winter and summer grazing density map at ~~a~~ 500 m resolution for 2020 (Zhan et al., 2023).

However, although these maps have provided good help in understanding grazing conditions on the QTP, there are currently still no maps that can satisfy the need for fine-scale grassland management with a long time span. In addition, the available livestock distribution maps of the QTP still need improvement in terms of modelling techniques and factor selection to obtain high-precision livestock spatialization data. For example, traditional methods like multiple~~layer~~ linear regression, while proven fundamental and widely applicable for livestock spatialization (Robinson et al., 2014; Ma et al., 2022), are being challenged by the development of computational science in recent years. Among them, machine learning technology is providing new opportunities towards more accurate predictions of livestock distribution~~intensity~~ (García et al., 2020). Random forests regression, for instance, is currently widely used to construct global, national as well as regional livestock spatialization dataset, and has been proved to have much better accuracy than traditional mapping techniques (Rokach, 2016; Nicolas et al., 2016; Gilbert et al., 2018; Chen et al., 2019; Dara et al., 2020; ~~Chen et al., 2019;~~ Li et al., 2021). Nevertheless, other more advanced machine learning methods with superior feature learning and more robust generalization capabilities, remains largely untapped for modelling geographic data (Ahmad et al., 2018; Heddam et al., 2020; Long et al., 2022). Thus, exploring the potential application of new advanced machine learning technologies in livestock spatialization remains a critical task. Furthermore, selecting

the suitable factors that influencing livestock grazing preferences is also the other critical challenge for enhancing the precision of grazing distribution dataset (Meng et al., 2023). Livestock grazing activities are often affected by abiotic and biotic resources, including climatic and environmental factors (Waha et al., 2018), herd foraging and grazing behaviours (Garrett et al., 2018; Miao et al., 2020), and conservation-oriented policies (Li et al., 2021). For instance, regions exceeding elevations of 5,600 m or slope greater than 40% are customarily unsuitable for grazing (Luo et al., 2013; Mack et al., 2013; Robinson et al., 2014; Chen et al., 2019). Moreover, t~~T~~he livestock generally prefer areas abundant in water and pasture resources for foraging (Li et al., 2021). Besides, ecological conservation policies also exert substantial influence, significantly affecting grazing distribution relative to the level of conservation priority. In addition, the health status of the grassland is an important factor influencing whether livestock choose to feed or not (Li et al., 2021). Consequently, indicators related to the above aspects are often employed to gauge the spatial heterogeneity of livestock distribution (Allred et al., 2013; Sun et al., 2021; Meng et al., 2023). Nonetheless, some most commonly used indicators like NPP or NDVI can result in misconceptions, as they may not fully characterize the grazing intensity. For example, grasslands with high NPP or NDVI are often preferred by livestock, but this doesn't necessarily correlate with grazing intensity in nature reserves due to strict policy restrictions (~~Veldhuis et al., 2019;~~ O'neill and Abson, 2009; Veldhuis et al., 2019; Zhang et al., 2021b). Conversely, areas with sparse grassland cover may support considerable livestock numbers, despite evidence of degradation (~~Zhang et al., 2021a;~~ Guo et al., 2015; Zhang et al., 2021a). Accordingly, further investigation of novel indicators is imperative to enhance the correlation between grassland and grazing intensity, thereby optimizing the integration of such influencing factors into grazing spatialization models.

In summary, the QTP is in pressing need for a high spatio-temporal resolution grazing dataset to address urgent and realistic challenges. But the existing livestock dataset specific to the QTP are fraught with several insufficient, predominantly concerning rough resolution, relatively backward census data, ~~and~~ as well as conventional methods in livestock spatialization. Moreover, the discrepancies in predictive indicators and modelling approaches within these dataset discourage their application in time-series analysis. Consequently, the generation of high-resolution and high-quality grazing map products has emerged as the most pressing challenge for the QTP. Here, we aim to (1) establish a ~~new~~ methodological framework by using more rational models and indicators than traditional studies to achieve fine-scale livestock spatialization; ~~to improve the traditional methods in generating gridded grazing dataset;~~ (2) select the grazing spatialization model with good performance by incorporating multi-source data with advanced machine learning techniques; and (3) ultimately, provide an annual grazing intensity ~~map~~ dataset with 100 m resolution spanning from 1990-2020. These maps can not only provide fundamental ~~fundamental comprehensive~~ dataset with finer spatio-temporal resolution to address the limitations of existing grazing intensity maps, but enhance a better understanding of sustainable management practices as well as other grassland-related issues across the QTP.

~~, to improve degraded grassland and enhance sustainability through stocking rates adjustment across the QTP, but support a better understanding of other socio-economics related studies.~~

2 Data and methods

2.1 Study area

Known as the Asia's water tower and the world's third pole, the QTP is geographically situated

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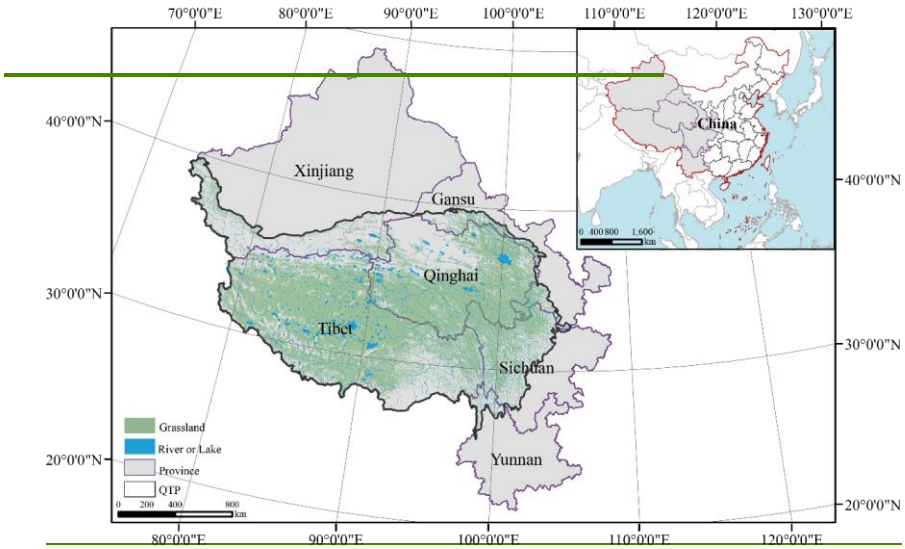
between 73°19~104°47′ east longitude and 26°00′~39°47′ north latitude, with a total area of about 2.61 million square kilometers (Figure 1). Its jurisdiction encompasses 182 counties within six provincial regions of China, including Tibet Autonomous Region, Qinghai Province, Xinjiang Uygur Autonomous Region, Gansu Province, Sichuan Province, and Yunnan Province (Meng et al., 2023). Elevation on the QTP predominantly ranges between 3,000 m and 5,000 m, with an average altitude exceeding 4,000 m. With grasslands constituting over half of its land cover, the QTP emerges as one of the most important pastoral areas in China. Alpine steppe, alpine meadow, and temperate steppe characterize the main grassland types on the QTP (Han et al., 2019; Zhai et al., 2022; Zhu et al., ~~2023b~~2023a). The complex geographical and climatic conditions of the QTP contributes to the markedly heterogeneous grassland distribution, which correspondingly lead to the high heterogeneity in livestock distribution. Moreover, social and economic development, coupled with policy initiatives directed towards grassland restoration, have noticeably impacted the livestock numbers on the QTP over recent decades (~~Li et al., 2021;~~ Li et al., 2016; Li et al., 2021).



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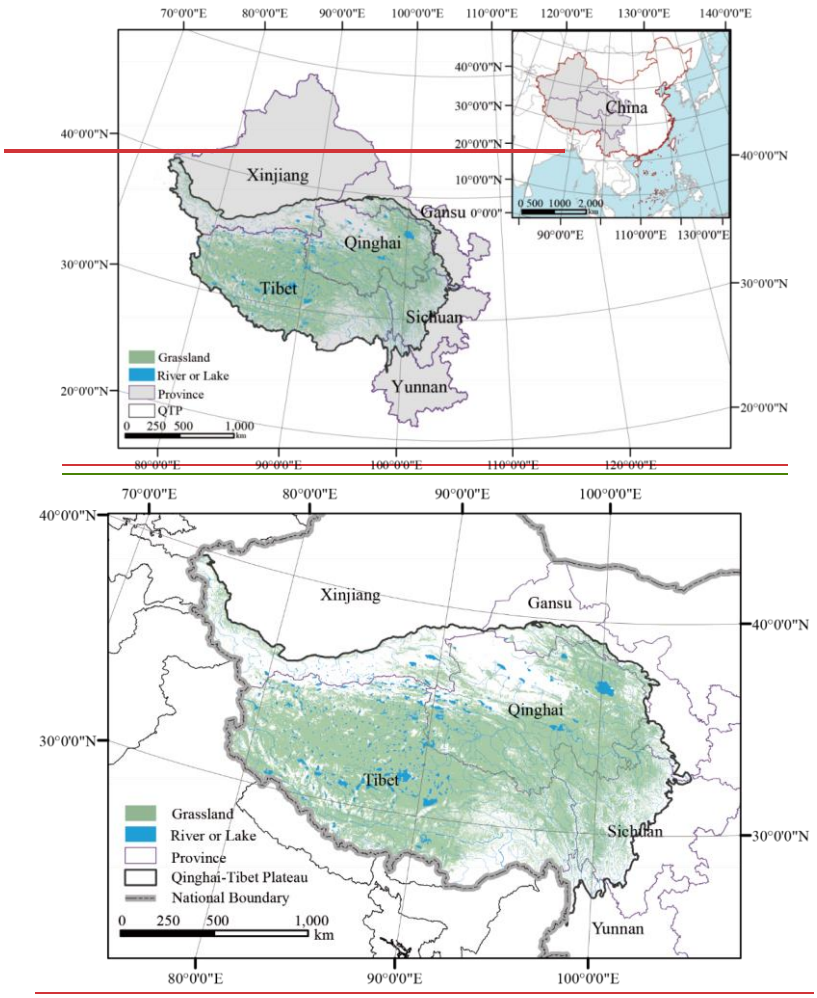

Figure 1. The geographic zoning map of the Qinghai-Tibet Plateau (QTP) superposed with grassland vegetation. Boundaries for the six provinces used for statistical analysis are also shown.

2.2 Data source

2.2.1 Census livestock data

The county-level census livestock data for the period between 1990 and 2020 were obtained from the Bureau of Statistics of each county across the QTP. The data includes the number of cattle, sheep, horse and mule, with the exception of counties in Yunnan Province, which lack data for the years from 1990 to 2007, and Ganzi Prefecture in Sichuan Province, which lack data for the years from 1990 to 1999, and Muli county in Sichuan Province, which lack data for the years from 1990 to 2007. For these counties belonging to the same prefecture, including counties in Ganzi and Aba prefectures in Sichuan Province, we used the livestock census data at the prefecture-level to carry out spatialization. For these

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counties in Yunnan Province, since they belong to different municipalities, it is not reasonable to replace them with municipal-level data. For these counties without livestock census data for some years, we Supplementaryed the missing data by linear interpolation with grazing density data in available year. In total, livestock data were available for 182 counties, and 4,998 independent records were finally generated. Furthermore, the respective quantities of different livestock types are converted to Standard Sheep Units (SU), in compliance with the Chinese national regulations (Meng et al., 2023).

Due to the difficulty of collecting township-level census livestock data, the validation data at the township ~~data~~ scale collected in this study only involved these townships of Baching County (2010-2018) and Gaize County (2018-2020) in Tibet, and Hongyuan County in Sichuan Province (2008). The township-level census livestock data cumulatively involves 18 townships with a total of 112 records, and were only used for auxiliary validation of the simulation results.

The validation data at the pixel scale also encompass a total of 112 records from 68 sites, which were collected from literatures, questionnaires and field surveys. Specifically, 93 records at 49 sites spanning the 1990-2020 period were obtained from 17 literatures, 19 records at 19 sites were obtained from the questionnaires and the field survey in 2021. The detailed information for these records can be found in the Supplementaryary files (Figure S3 and Table S3).

2.2.2 Factors affecting grazing activities

In this study, topography, climatic, environmental and socio-economic impacts were considered as influential factors on grazing activities (Li et al., 2021; Meng et al., 2023). Accordingly, altitude, slope, distance to water source, population density, air temperature, precipitation and human-induced impacts on NPP (HNPP) was selected as indicators. Specifically, elevation is derived from the DEM dataset accessible via the Resource and Environmental Data Cloud Platform of the Chinese Academy of Sciences (https://www.gscloud.cn), which also facilitated slope calculation. Rivers and lakes were obtained from the National Tibetan Plateau Data Center (https://data.tpdc.ac.cn), and the nearest Euclidean distance from each pixel to rivers or lakes is calculated accordingly. Meteorological elements such as daily air temperature and precipitation were downloaded from the China Meteorological Data Service Center (http://data.cma.cn). For the grid dataset that is not conditionally available, including population density, temperature, precipitation and HNPP, we detailed the creation process in the ~~Supplement~~Supplementaryary file. All datasets utilized in this study were harmonized to consistent coordinate systems and resolutions (WGS 1984 Albers, 100 m).

2.3 Methodological framework

We ~~develo~~adopt~~p~~ed a comprehensive methodological framework for mapping high-resolution grazing intensity on the QTP. Three~~Four~~ major steps are included to predict the distribution pattern of grazing intensity: (1) identifying factors affecting grazing activites and ~~, (2)~~ extracting theoretical suitable areas for livestock grazing, (~~3~~2) building grazing spatialization model, and (43) filtering the model and correcting the grazing map. An exhaustive explanation of each step is provided in Figure 2.

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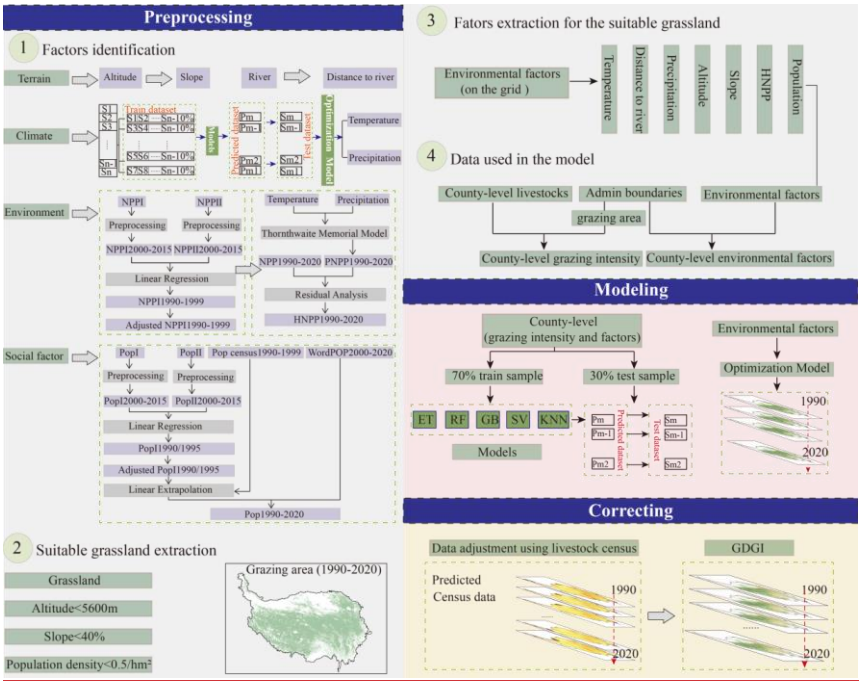
Preprocessing
1 Factors identification
Terrain
Altitude
Slope
River
Distance to river
Climate
Train dataset
Models
Predicted dataset
Test dataset
Optimization Model
Temperature
Precipitation
Environment
NPPI
NPPII
Preprocessing
NPPI2000-2015
NPPII2000-2015
Linear Regression
NPPI1990-1999
Adjusted NPPI1990-1999
Temperature
Precipitation
Thornthwaite Memorial Model
NPP1990-2020
PNPP1990-2020
Residual Analysis
HNPP1990-2020
Social factor
PopI
PopII
Pop census1990-1999
WordPOP2000-2020
Preprocessing
PopI2000-2015
PopII2000-2015
Linear Regression
PopI1990/1995
Adjusted PopI1990/1995
Linear Extrapolation
Pop1990-2020
2 Suitable grassland extraction
Grassland
Altitude<5600m
Slope<40%
Population density<0.5/hm²
Grazing area (1990-2020)
3 Fators extraction for the suitable grassland
Environmental factors (on the grid)
Temperature
Distance to river
Precipitation
Altitude
Slope
HNPP
Population
4 Data used in the model
County-level livestocks
Admin boundaries
Environmental factors
grazing area
County-level grazing intensity
County-level environmental factors
Modeling
County-level (grazing intensity and factors)
Environmental factors
70% train sample
30% test sample
Optimization Model
ET
RF
GB
SV
KNN
Models
Predicted dataset
Test dataset
1990
2020
Correcting
Data adjustment using livestock census
GDGI
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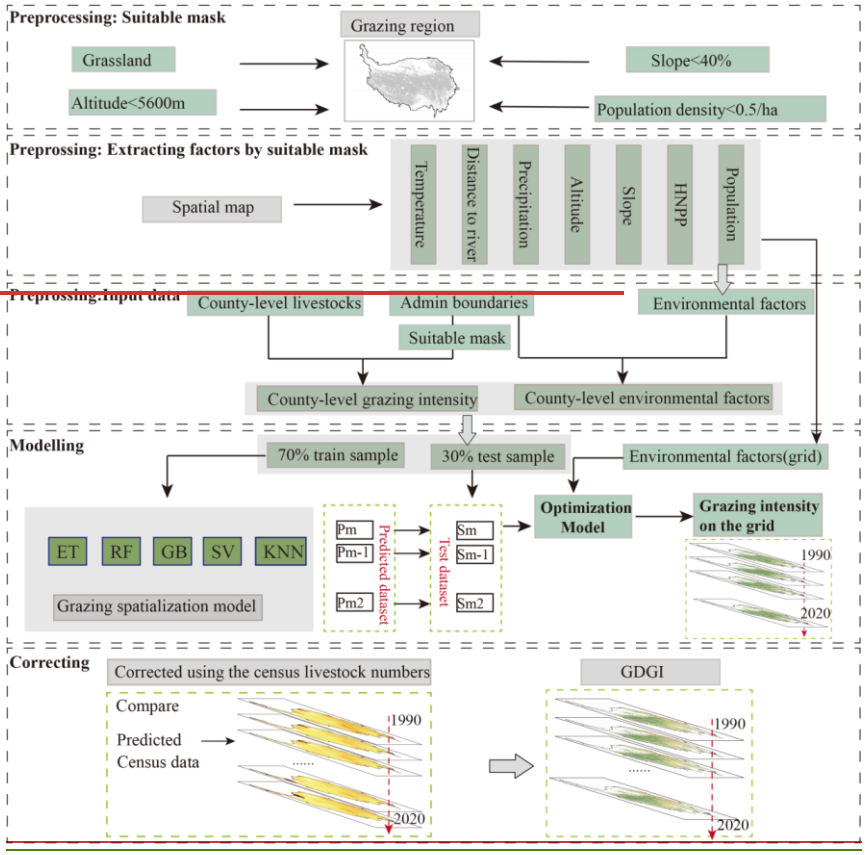

Figure 2. Flowchart of creating grazing intensity maps using different methods and source products.

2.3.1 Identifying factors and theoretical suitable areas for grazing

~~### 2.3.1 Identifying factors affecting grazing activities~~

~~The spatial patterns of abiotic and biotic resources, incorporating food availability, environmental stress, and herder preference critically affect grazing activities (Meng et al., 2023). In light of this, seven influencing factors in four aspects were selected for grazing intensity mappingd (Figure 2-1).~~

~~### 2.3.2 Extracting theoretical suitable areas for grazing~~

In this study, we assumed that grazing activities are confined solely to grassland. Consequently, the potential grazing areas for each year were identified on the basis of grassland boundaries, which was extracted from the 30 m annual land cover dataset (CLCD) (Yang and Huang, 2021). Furthermore, grassland with slope over 40% and elevation higher than 5,600 m respectively, were considered unsuitable for grazing and were therefore excluded from the potential grazing area in the subsequent simulations (Robinson et al., 2014). In addition, the grassland with population density greater than 50 inhabitants ~~hm~~km^{-2} were also excluded. The remaining isolated grassland was thus categorized as

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theoretical feasible grazing regions.

The spatial patterns of abiotic and biotic resources, incorporating food availability, environmental stress, and herder preference critically affect grazing activities (Meng et al., 2023). In light of this, seven influencing factors in four aspects were selected for grazing intensity mapping (Figure 2-1).

2.3.~~3~~2 Building grazing spatialization model

By performing regional statistics, the annual average values for each grazing influence factor were extracted from the theoretically suitable grazing areas at the county scale, and were further used as independent variables in the model construction. The dependent variable for the model was acquired by determining the livestock density within each county, followed by a logarithmic transformation of the values to normalize the distribution of the dependent variable. Consequently, a total of 4,998 samples were derived from the aforementioned independent and dependent variables. Of these samples, 70% were allocated for model training, while the remaining 30% comprised the test sets, serving to validate the model's performance. Subsequently, we built grazing spatialization models using five machine learning algorithms at the county scale, including Support Vector regression (SV) (Cortes and Vapnik, 1995; Lin et al., 2022), K-Nearest Neighbors (KNN) (Cover and Hart, 1967), Gradient Boosting regression (GB) (Friedman, 2001; Pan et al., 2019), Random Forests (RF) (Breiman, 2001) and Extra Trees regression (ET) (Geurts et al., 2006; Ahmad et al., 2018) (see Supplementary file for details). Lastly, to assess the accuracy of the spatialized livestock map, the predicted livestock intensity values were juxtaposed with the livestock statistical data from each respective county.

2.3.~~4~~3 Correcting the grazing map

We further used the optimal model to predict the geographical distribution of grazing density across the QTP. To maintain better consistency between the predicted livestock number and the census data, the estimated results were adjusted using the census livestock numbers at the county scale as a control according to Equation (1).~~.~~ Consequently, the corrected and refined map is presented as the final grazing intensity map in this study.

$$L_{correction} = \frac{L_{CCensus}}{L_{Cgrid}} \times L_{grid} \quad (1)$$

where $L_{correction}$ is the predicted pixel-scale livestock number after adjustment, L_{Cgrid} represents the estimated livestock number for each county, $L_{CCensus}$ is the census livestock number for each county, and L_{grid} refers to the predicted livestock number at the pixel scale.

2.4 Accuracy evaluation

We used three accuracy validation indexes to evaluate the performance of five machine learning algorithms, including coefficients of determination (R^2), mean absolute error (MAE), and root mean square error (RMSE), by through a comparison of the predicted value with the census data. The definitions of three metrics are presented in Equation~~.~~ (~~1~~2)~(~~4~~3).

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$$R^2=1-\frac{\sum_{i=1}^{n}(C_i-P_i)^2}{\sum_{i=1}^{n}(C_i-\bar{C})^2} \quad (12)$$

$$MAE=\frac{1}{n}\sum_{i=1}^{n}|C_i-P_i| \quad (23)$$

$$RMSE=\sqrt{\frac{1}{n}\sum_{i=1}^{n}(C_i-P_i)^2} \quad (34)$$

where C_i and P_i are the census livestock data and the predicted value for county i, respectively; $\bar{C}$ represents the mean census value for all county; and n gives the total number of counties.

3 Results

3.1 Performances of models

Table 1 summarizes the efficiency of the five used machine learning models with considering all three accuracy evaluators of R^2, MAE and RMSE. It can be seen that the ET model performs the best, with its R^2 exceeding 0.955, and MAE (0.081 SU/hm^2) and RMSE (0.164 SU/hm^2) significantly lower than the value of RF, GB, KNN and SVM models. Figure 3 illustrates the correlation between the census livestock data and the livestock numbers predicted by the model for each county from 1990 to 2020. It demonstrated that the ET-predicted data displayed a distribution pattern consistent with that of other models, but the scatter points of the ET model were more convergent to the 1:1 diagonal line, indicating a superior fit compared to the other models. These comparisons suggest that the ET model possesses superior robustness and can, therefore, provide stable estimations of livestock intensity on the QTP.

Table 1. Comparison of mapping accuracy for five machine learning models based on the same validation datasets

Models	R^2	MAE (SU/hm^2)	RMSE (SU/hm^2)
ET	0.955	0.081	0.164
RF	0.928	0.099	0.208
GB	0.859	0.197	0.300
KNN	0.786	0.186	0.384
SVM	0.380	0.419	0.750

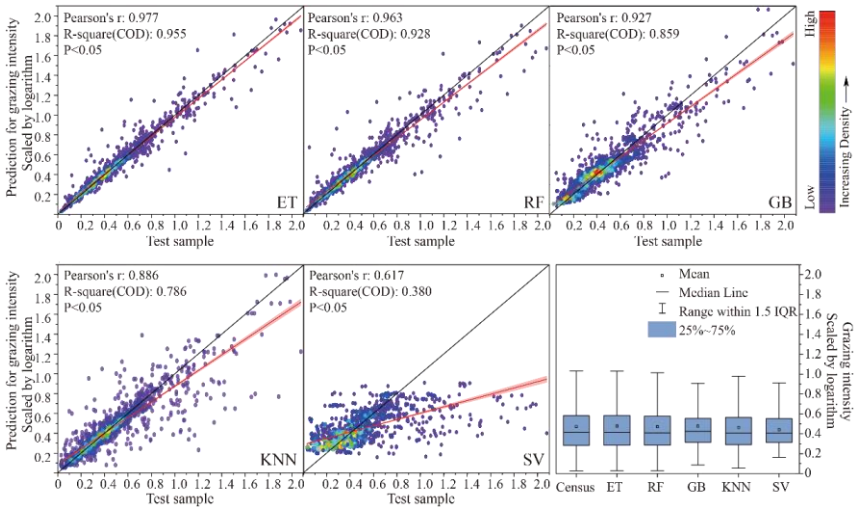

Figure 3. Scatterplots of model-predicted livestock numbers and census grazing data at the county scale. The red solid line and the black solid line are the fitting line and the 1:1 diagonal line, respectively.

Utilizing the ET model, we predicted the spatio-temporal distribution of grazing intensity across the QTP from 1990 to 2020 with a resolution of 100 m × 100 m. To test the accuracy of these maps, we aggregated the prediction results from the pixel level to county level and compared them with the livestock census data (~~Fig~~Figure~~ure~~ 4a). It is evident that the predicted livestock intensity was highly consistent with the county-level census data, displaying particular robustness in lower grazing intensity scenarios (~~Fig~~Figure~~ure~~ 4b). Specifically, comparing with 2.983 SU/hm^2 for the mean census data, our county-level predicted datasets revealed an average grazing intensity of 3.106 SU/hm^2, with MAE of 0123 SU/hm^2, RMSE of 0.580 SU/hm^2, and R^2 of 0.669. Moreover, the data discrepancies for 76.31% (number of counties=3,814) were not exceeding 0.6 SU/hm^2, and 91.74% (number of counties=4,585) remaining under 1.0 SU/hm^2. Finally~~Furthermore~~, employing county-level livestock census data as a benchmark for quality control, we obtained the final annual gridded datasets for grazing intensity (GDGI) across the QTP spanning 31 years from 1990 to 2020.

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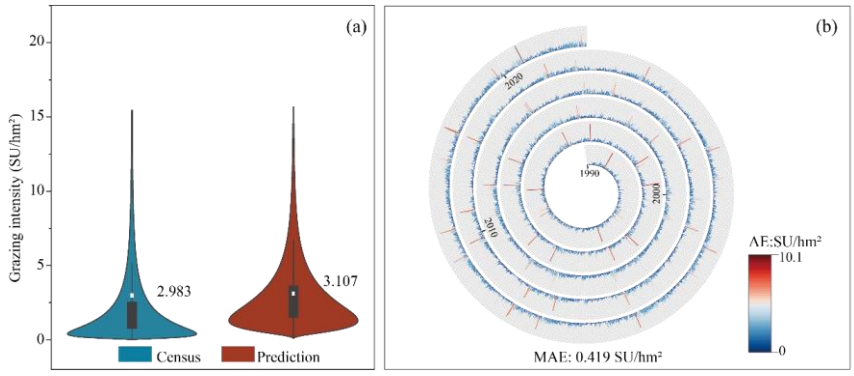
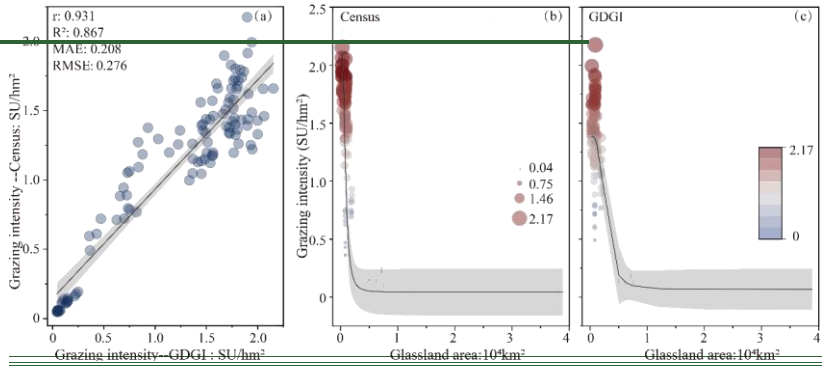


Figure 4. Accuracy of the ET-predicted grazing intensity results at spatial resolution of 100 m from 1990 to 2020.

(a) comparison of the predicted value and the census data at the county scale; (b) absolute error for each county.

3.2 Validation of the GDGI dataset ~~at the county scale~~

~~We further validated the precision of the GDGI dataset using the township-level livestock statistic data. Encouragingly, the evaluation results showed that the GDGI dataset still has excellent performance at the township scale (Figure 6a), with R^2 of 0.867, MAE of 0.208 SU/hm^2, and RMSE of 0.276 SU/hm^2. In addition, similarly to the census data, the GDGI dataset indicated that some townships with few grassland area are still under high grazing pressure (Figure 6b, 6c).~~



~~Figure 6. Validation results of grazing intensity between the GDGI dataset and the township census livestock data: (a) linear fit of predicted number and statistic data; (b-c) logistic fit of grazing data and grassland area.~~

We firstly confirmed the accuracy of the GDGI dataset based on 112 field grazing intensity records at 68 sites (see Table S3 in Supplementary file for details), which ranged from 0 to 5.61 sheep unit per hectare (SU/hm^2), and covered three main grasslands on the QTP: the alpine steppe (N=62), alpine meadow (N=46), and alpine desert steppe (N=4). The GDGI dataset was assessed by undertaking a comparative accuracy assessment between it and the field grazing intensity data (Figure 5a). It can be seen that in general, our dataset was highly consistent with the reference ground-truth validation data, with R^2 = 0.804, MAE = 0.572 SU/hm^2, and RMSE = 0.953 SU/hm^2. Moreover, the absolute errors between the GDGI data and the field grazing intensity data were relatively small, with more than half of the records having an error below 0.3 SU/hm^2, 78.57% below 1.0 SU/hm^2, and 89.29% below 1.5 SU/hm^2 (Figure 5b).

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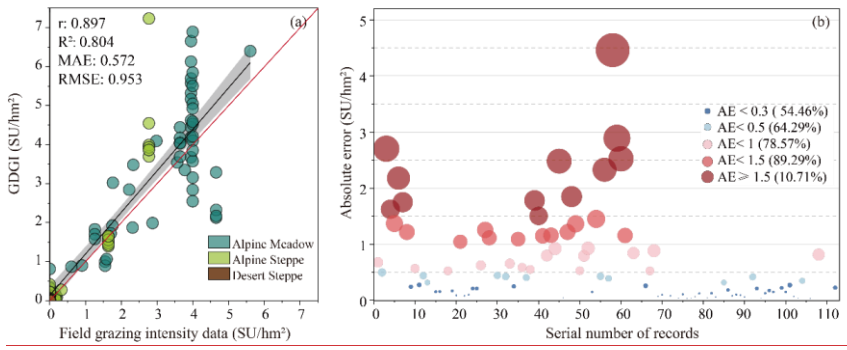

Figure 5. Validation of the GDGI dataset using 112 field grazing intensity records at the pixel scale: (a) linear fitting results; (b) absolute error (AE) distribution.

We further ~~further~~ validated the precision of the GDGI dataset using the township-level livestock census data. Encouragingly, the evaluation results showed that the GDGI dataset ~~still~~ has excellent performance at the township scale (Figure ~~6~~6a), with R^2 of 0.867, MAE of 0.208 SU/hm^2, and RMSE of 0.276 SU/hm^2. In addition, similarly to the census data, the GDGI dataset indicated that some townships with few grassland area are still under high grazing pressure (Figure ~~6~~6b and ~~6~~6c).

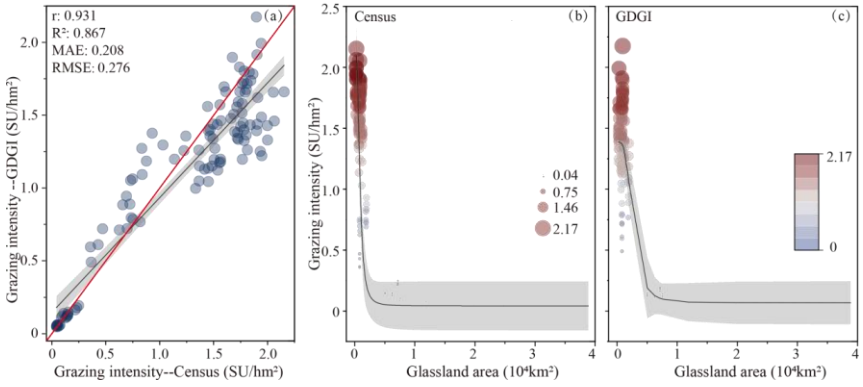

Figure ~~6~~6. Validation of the GDGI dataset using census livestock data at the township level: (~~Validation results of grazing intensity between the GDGI dataset and the township census livestock data:~~ (a) linear fit of predicted number and census~~statistic~~ data; (b-c) logistic fit of grazing intensity data and grassland area.

~~Table 2. Accuracy assessments for the GDGI dataset in different provinces from 1990 to 2020~~

~~Province~~	~~Number of counties~~	~~Census (SU/hm^2)~~	~~GDGI (SU/hm^2)~~	~~MAE (SU/hm^2)~~	~~RMSE (SU/hm^2)~~	~~R^2~~
~~XinJiang~~	~~13~~	~~3.231~~	~~3.246~~	~~0.017~~	~~0.230~~	~~0.997~~
~~YunNan~~	~~6~~	~~20.401~~	~~20.401~~	~~0.00~~	~~0.00~~	~~1~~

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GanSu	14	7.459	7.439	0.020	0.143	1
QingHai	43	3.761	3.757	0.005	0.042	1
SiChuan	32	2.379	2.383	0.004	0.094	0.992
Tibet	74	1.225	1.223	0.010	0.025	0.993
QTP	182	2.983	2.981	0.006	0.099	1

Note: AE represents absolute error

A further comparison of the accuracy of grazing intensity maps across various provinces revealed distinct differences. Specifically, Table 2 showed that Yunan province achieved the best accurate prediction (MAE=0.000, RMSE=0.00 and R^2=1), closely followed by Sichuan Province (MAE=0.004, RMSE=0.094 and R^2=0.992). Conversely, prediction performance from Xinjiang Uygur Autonomous Region trailed behind (MAE=0.017, RMSE=0.230 and R^2=0.997).

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3.3 Spatio-temporal variations of grazing intensity

Figure 5a-c illustrated the highly consistency between the GDGI dataset and the county-scale census livestock data, as evidenced by R^2 of 1, and MAE and RMSE of 0.006 SU/hm^2 and 0.099 SU/hm^2, respectively. Moreover, the spatial heterogeneity within the counties was effectively reflected by the GDGI dataset, a characteristic not illustrated by the census dataset (Figure 5b, 5e). In terms of the temporal trends of grazing intensity, the GDGI dataset overall exhibited consistent trends with the livestock censusstatistic data (FigFigureure 57d-57f). Specifically, the census data indicated the livestock numbers remained high and largely stable from 1990 to 1997, followed by a sharp decline from 1997 to 2001, and then remained a substantial decline in grazing intensity from 1990 to 2001, followed by a period of fluctuation post-2001, which was successfully captured by the GDGI dataset (Figure 5). MoreoverIn addition, the spatial heterogeneity of grazing intensity within the counties over the QTP was also effectively reflected by the GDGI dataset, a characteristic not illustrated by the census dataset. the GDGI dataset can also capture the spatial distribution of livestockFor example, areas of high grazing intensity were concentrated in the northeastern and south-central regions of the plateau, mainly including the eastern part of Qinghai Province, the southwestern part of Gansu Province, the northwestern part of Sichuan Province, and the eastern region of the Tibet Autonomous Region (Figure 7e and 7f).

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Over the past 31 years, 63.95% of the plateau's grassland showed a decreasing trend in grazing intensity, with 49.80% showing significant decreases, primarily located in the eastern Sanjiangyuan area and the southwestern region of the QTP (Figure 7e and 7f). Meanwhile, grazing intensity was increasing in 36.05% of the grassland, but most of them (60.16%) did not reach the level of significance and were mainly distributed in the northeastern plateau (Figure 7e and 7f).

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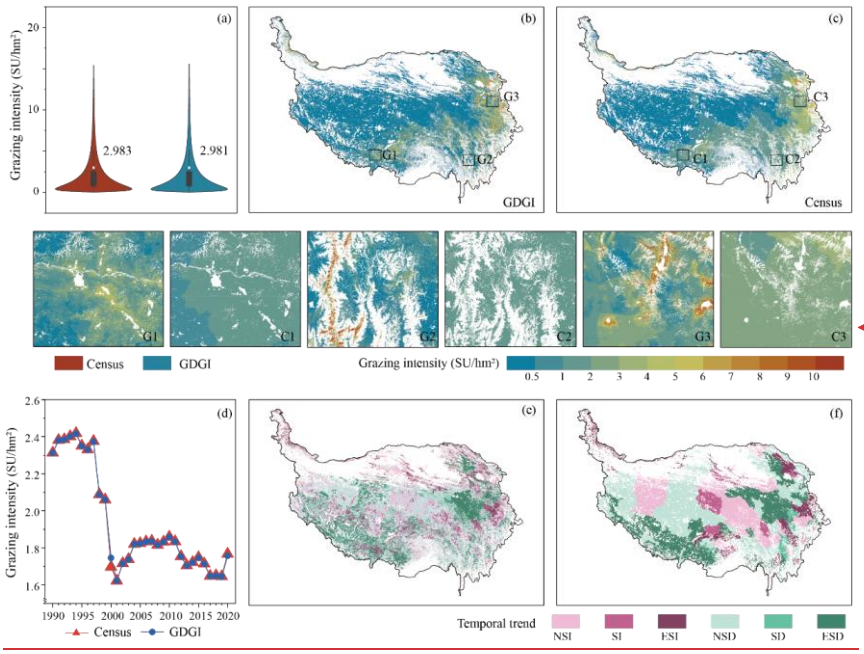

, depicting a decrease and fluctuation in grazing intensity within western and certain central regions, whilst noting an increase in other areas (Figure 5e, 5f).

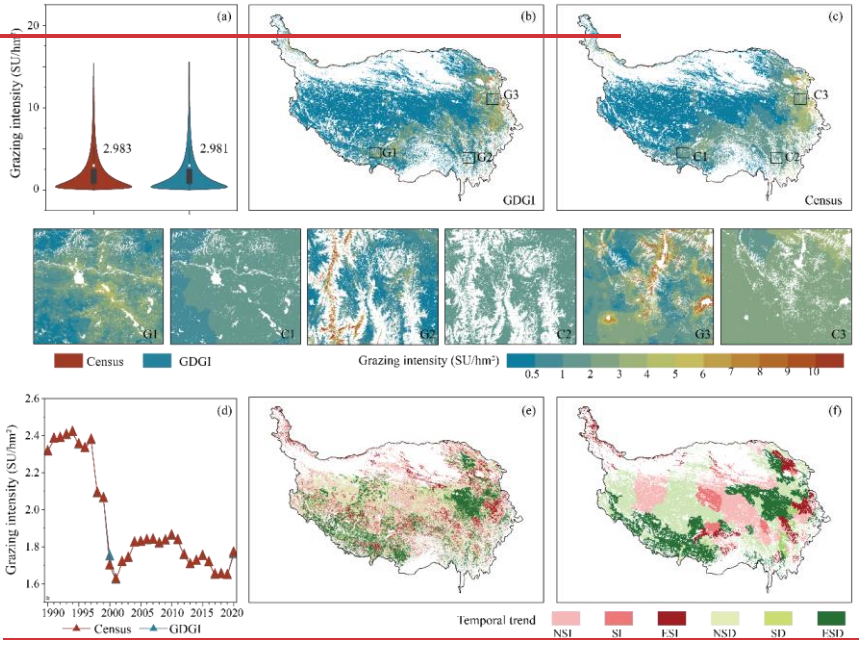

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Figure ~~5~~7. Validation of the GDGI maps using the census grazing data from 1990 to 2020: (a) violin plot of the census data and the predicted value; (b-c) spatial distribution in SU per pixel; (d) temporal change in SU per year (only including 124 counties with livestock census data); (d-f) spatial distribution of SU changes tested by sen's slope and Mann-Kendall.

Note: ESI for Extremely Significant Increase (slope>0 & p<0.01); SI for Significant Increase (slope>0 & p<0.05); NSI for Non-significant increase (slope>0 & p>0.05); ESD for Extremely Significant Decrease (slope<0 & p<0.01); SD for Significant decrease (slope<0 & p<0.05); NSD for Non-significant decrease (slope<0 & p>0.05).

~~Table 2. Accuracy assessments for the GDGI dataset in different provinces from 1990 to 2020~~

~~Province~~	~~Number of counties~~	~~Census (SU/hm^2)~~	~~GDGI (SU/hm^2)~~	~~MAE (SU/hm^2)~~	~~RMSE (SU/hm^2)~~	~~R^2~~
~~XinJiang~~	~~13~~	~~3.231~~	~~3.246~~	~~0.017~~	~~0.230~~	~~0.997~~
~~YunNan~~	~~6~~	~~20.401~~	~~20.401~~	~~0.00~~	~~0.00~~	~~1~~
~~GanSu~~	~~14~~	~~7.459~~	~~7.439~~	~~0.020~~	~~0.143~~	~~1~~
~~QingHai~~	~~43~~	~~3.761~~	~~3.757~~	~~0.005~~	~~0.042~~	~~1~~
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~~QTP~~	~~182~~	~~2.983~~	~~2.981~~	~~0.006~~	~~0.099~~	~~1~~

~~Note: AE represents absolute error~~

~~A further comparison of the accuracy of grazing intensity maps across various provinces revealed distinct differences. Specifically, Table 2 showed that Yunan province achieved the best accurate prediction (MAE=0.000, RMSE=0.00 and R^2=1), closely followed by Sichuan Province (MAE=0.004, RMSE=0.094 and R^2=0.992). Conversely, prediction performance from Xinjiang Uygur Autonomous Region trailed behind (MAE=0.017, RMSE=0.230 and R^2=0.997).~~

~~3.3 Validation of the GDGI dataset at the township scale~~

~~We further validated the precision of the GDGI dataset using the township-level livestock statistic data. Encouragingly, the evaluation results showed that the GDGI dataset still has excellent performance at the township scale (Figure 6a), with R^2 of 0.867, MAE of 0.208 SU/hm^2, and RMSE of 0.276 SU/hm^2. In addition, similarly to the census data, the GDGI dataset indicated that some townships with few grassland area are still under high grazing pressure (Figure 6b, 6c).~~

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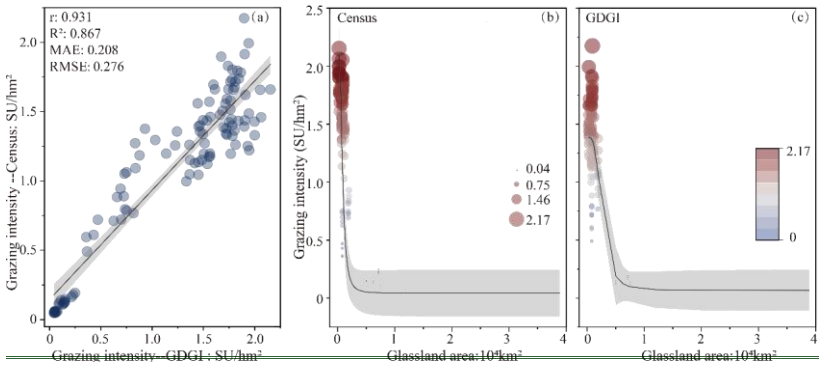

Figure 6. Validation results of grazing intensity between the GDGI dataset and the township census livestock data: (a) linear fit of predicted number and statistic data; (b-c) logistic fit of grazing data and grassland area.

4 Discussion

4.1 Comparison with other grazing intensity maps

To further assess the effectiveness and reliability of the developed GDGI dataset, the mapping results were juxtaposed with seven publicly available grazing intensity maps covering the QTP (Table 32). It can be seen that despite their public availability, these maps lacked both in spatial and temporal resolution when juxtaposed with the GDGI maps. Our analysis was extended to four openly accessible gridded livestock datasets, including GI-Sun (Sun et al., 2021), ALCC (Liu, 2021), GI-Meng (Meng et al., 2023) and GLWs (Gilbert et al., 2018). Among the GLW series, GLW3 and GLW4 were chosen owing to their superior performances over GLW1 and GLW2, as indicated by Gilbert et al. (2018). A commonality among all five maps was the consistency for the spatial patterns of grazing intensity, with prevalent high and low intensities in the northeast and northwest regions, respectively (FigFigure 78). However, these maps differed significantly in terms of accuracy. As the grazing intensity maps of GLWs and ALCC were produced based on the livestock census data in 2001 and 2015, an accuracy comparison for the corresponding years was conducted among the five datasets. It was observed from the scatter diagrams that R^2 between the predicted and livestock statistic data for GI-Sun, ALCC, and GLWs are lower than 0.6, which is significantly lower than the accuracy of GDGI (R^2 exceeds 0.9) (FigFigure 7a8a). Furthermore, GDGI exhibited the closest to the census data, as evidenced by the fact that MAE and RMSE are less than 1 (FigFigure 7b8b, 7c8c). Moreover, the GDGI dataset spanning 31 years (1990-2020) earmarked it as a more suitable choice for long-term studies in comparison to the other four datasets. Regarding spatial distribution, the overall patterns of these grazing maps are largely consistent, exhibiting higher density patterns in the southeast and lower in the northwest. However, notable discrepancies are still apparent in the finer details. In gGenerally speaking, in terms of visually representing the spatial distribution of livestock, the GDGI maps exhibit the best performance.

The above advantageous of the GDGI dataset are understandable. First, the livestock census data used in GDGI is more detailed, aiding in enhancing the accuracy of the estimation results. Specifically, GI-sun, ALCC, GI-Meng and GDGI all use county-level livestock statistics to map grazing intensity, whereas GLW3 and GLW4 are based on provincial-level census data to map, which results in their

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accuracy lagging significantly behind the four other datasets (Nicolas et al., 2016; Sun et al., 2021)~~(Nicolas et al., 2016, Sun et al., 2021)~~. Second, grazing densities are estimated by dividing the number of livestock from the statistical data, after a mask excluding theoretical unsuitable grazing areas. However, these maps differ in their definitions of suitable grazing areas. In this study, as with the GI-sun and GI-Meng maps, we considered grazing to occur only on grasslands, and further excluded unsuitable areas such as high elevations and steep slopes. This kind of definition is clearly more reasonable than the GLW series, which removed only water bodies, urban core areas, and protected areas with relatively tight regulations of human activity (Mcsherry and Ritchie, 2013; He et al., 2022)~~(McSherry and Ritchie, 2013, He et al., 2022)~~. However, the GI-Meng dataset considers the core areas of protected areas as grazing-free region, it does not match the actual situation on the QTP (Zhao et al., 2020; ~~Jiang et al., 2023;~~ Li et al., 2022b; ~~Zhao et al., 2020~~Jiang et al., 2023). Those different thresholds for the definition of suitable grazing areas are account for the fact each map has different theoretical grazing regions. Third, these maps decompose the livestock census data to pixels based on different mathematical theories, which also leads to differences in prediction accuracy across maps. Specifically, ALCC used a multivariate linear regression algorithm to predict grazing intensity, which has been shown to be significantly inferior to the RF machine learning method employed by GI-Meng, GLW3 and GLW4 (Nicolas et al., 2016; Li et al., 2021)~~(Nicolas et al., 2016, Li et al., 2021)~~. In this study, we used the ET model to predict livestock numbers and achieved higher accuracy accordingly. Finally, differences in the selection of factors affecting livestock distribution across maps may also lead to differences in map accuracy. Specifically, GI-sun only used the NPP as indicator, but it is not simply linearly related to grazing intensity (Gilbert et al., 2018; Sun et al., 2021; Ma et al., 2022~~; Gilbert et al., 2018~~). ALCC considered the population density, NPP, and terrain as indicators, which are also incomplete considerations of the influencing factors. On the other hand, GLW series dataset considered 12 factors, such as NDVI, EVI, population distribution and elevation. GI-Meng dataset incorporated 14 factors including NDVI, soil PH, available nitrogen, available phosphorus, and available potassium. However, GLWs and GI-Meng ignored the decrease in the prediction accuracy due to redundancy among the factors. In this study, we selected factors related to grazing activities including terrain, climate, environment and social factor, and constructed a prediction model with seven factors including population density, elevation, climate, and HNPP. Unlike other livestock products, this study used HNPP for the first time to replace the commonly used NPP, or NDVI, or EVI as indicator, which has be proved to be more accurately expressed the relationship between livestock and grassland (Huang et al., 2022).

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Table ~~3~~2. Summary of map-derived parameters for this study and other seven public gridded livestock datasets covering the QTP.

Dataset	Accessibility	Census	Temporal resolution	Spatial resolution	Period (years)	Method	Livestock type
GDGI	Yes	County	annual	100 m	1990-2020 (31)	ET	Standard SU
GLW3	Yes	Province/sub-Province	annual	0.083°(≈10 km)	2001 (1)	RF	Cattle, ducks, pigs, chickens,
GLW4	Yes	Province/sub-Province	annual	0.083°(≈10 km)	2015 (1)	RF	sheep, goats
GI-Sun	Yes	County	five-year interval	1 km	1990-2015 (6)	LRA	Standard SU
ALCC	Yes	Province/sub-Province	annual	250 m	2000-2019 (20)	MLR	Standard SU
GI-Meng	Yes	County	annual	0.083°(≈10 km)	1982-2015 (34)	RF	Standard SU
GI-Li	No	County	five-year interval	1 km	2000-2015 (4)	DNN	Cattle and sheep
GI-Zhan	No	County	season	15″ (≈500 m)	2020 (2)	RF	Standard SU

Note: LRA is the abbreviation of linear regression analysis.

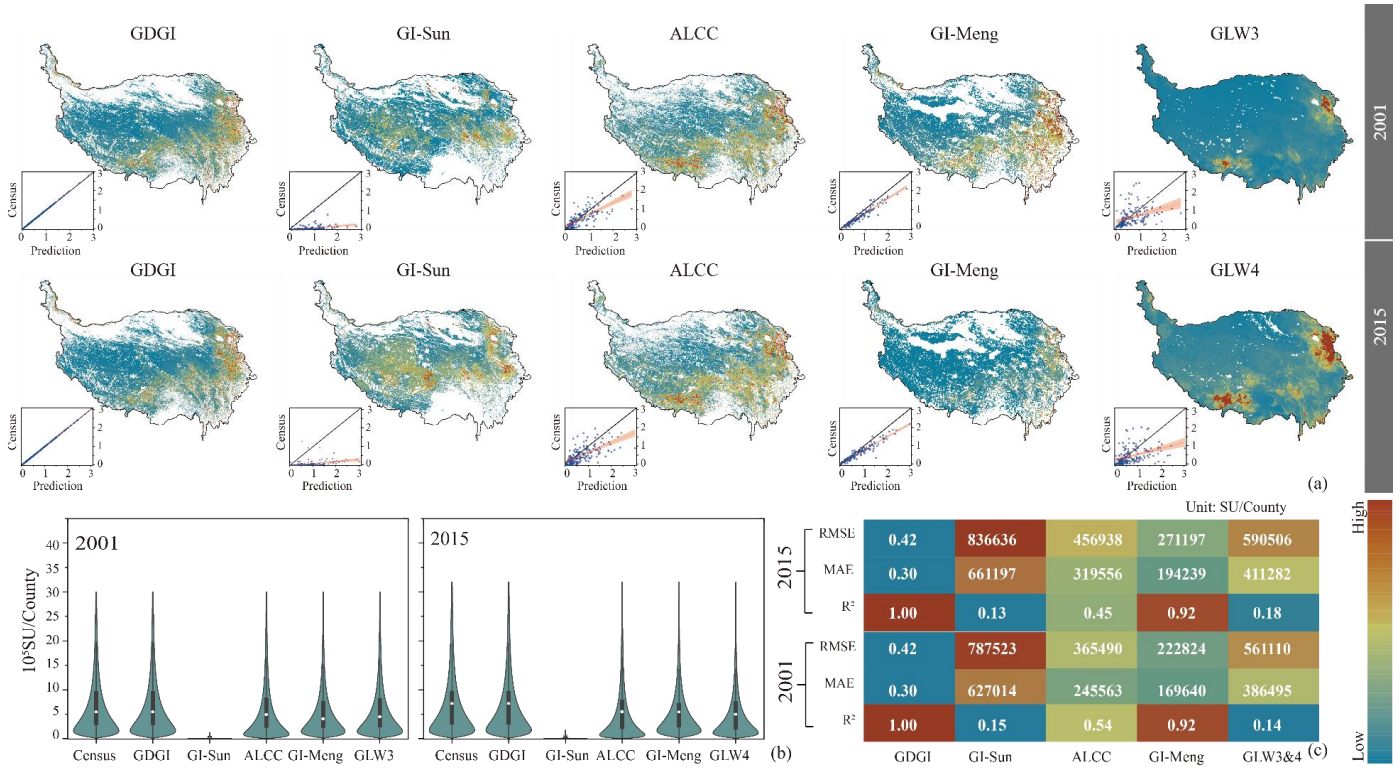

Figure 78. Comparisons of different grazing datasets for the years 2001 and 2015: (a) spatial patterns; (b) predicted livestock number and census data at county scale; (c) accuracy evaluation between predicted livestock number and statistic data. Note: all grazing intensity map >0

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4.2 Spatial heterogeneity of grazing intensities

In general, the multiyear average grazing intensity on the QTP increased from west to east during 1990 to 2020, with broad spatial heterogeneity (Figure ~~7~~7). Highest grazing intensity was found mainly in the northeastern and south-central regions of the Plateau (mostly higher than 5.0 SU/hm²), while they were lowest in the northwest (mostly less than 1.0 SU/hm²). Over the past 31 years, the average grazing intensity decreased across most of the Plateau, but 36.05% of the entire QTP grassland still encountered continuous grazing intensity increase, especially in the northeastern regions (Figure ~~7~~7).

The spatial heterogeneity of grazing intensities on the QTP may be attributed to the following reasons. First, complex geographic and climatic conditions on the QTP determine the heterogeneity of grassland, which in turn affects livestock distribution (Wang et al., 2018; Wei et al., 2022).~~(Wang et al., 2018; Wei et al., 2022)~~ In general, the grazing intensity patterns shown in the GDGI maps are basically consistent with the stocking rate threshold patterns in the QTP grasslands, both decreased from east to west (Zhu et al., 2023b)~~(Zhu et al., 2023)~~. This phenomenon partially reflects the heterogeneity of the grasslands, as the alpine meadows and the steppes mainly distributed in the east and the west, respectively. Second, the dynamics of socio-economic development are obviously another important factors determining grazing intensity. In areas falling behind in terms of the socio-economic indicators, herders prefer to increase livestock in efforts to improve household incomes, leading to greater pressure on grasslands in these regions (Fang and Wu, 2022)~~(Hammad and Tumeizi, 2012; Fang and Wu, 2022)~~. In addition, the perceived increases in human population also resulted in the considerably increased need to more livestock (Wei et al., 2022)~~(Wei et al., 2022)~~. Third, the grazing intensity patterns across the QTP partially reflected the effects of management policies launched in different periods. For example, the grazing intensity on the QTP grassland increased substantially in the early 1990s, likely due to the launch of the household contract responsibility system. Moreover, the grazing intensity decreased in the late 1990s and early 2000s (Figure 7d), reflecting the implement of several strict ecological conservation programs, such as the grazing withdrawal program, conversion of cropland to grassland and ecological subsidy and award system. Finally, natural disasters have also been an important cause of the drastic reduction in livestock numbers. For example, the snow disasters that occurred in Naqu in 1997-1998, central Tibetan Plateau, resulted in the loss of 820,000 livestock (Ye et al., 2020).

4.~~2~~3 Implications for grazing management

Nearly half of the grasslands on the QTP have been reported to be degraded over the past four decades (Wang et al., 2018; Dong et al., 2020)~~(Wang et al., 2018; Dong et al., 2020)~~, with some reports even indicating that the degraded grassland has reached 90% (Wang et al., 2021)~~(Wang et al., 2021)~~. It is widely recognized that overgrazing is the predominant and most pervasive unsustainable human activity continuing to drive grassland degradation on the QTP (Wang et al., 2018; Chen et al., 2019).~~(Wang et al., 2018; Chen et al., 2019).~~ Generally, these degraded grassland on the QTP can be effectively restored by adaptive management (Wang et al., 2022)~~(Wang et al., 2022)~~. However, better management of grasslands requires a deeper understanding of the anthropogenic activities, which still remain an important challenge and can be effectively addressed by the GDGI dataset.

According to the GDGI maps generated in this study, high-intensity grazing activities are mainly concentrated in the northeastern as well as the south-central part of the QTP, with the grazing intensity

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in some areas even nearly more than ten times than the average value of the entire plateau (~~Fig.~~Figure 5b), and have exceeded the stocking rate threshold of these grasslands (Zhu et al., 2023b). Population growth and the related increasing livelihood demands is one of the main reasons for this increase. To meet daily needs and enhance household income, the herders have endeavored to increase livestock, thereby intensifying grazing pressures on the grasslands over the QTP (~~Fang and Wu, 2022;~~ Abu Hammad and Tumeizi, 2012; Fang and Wu, 2022). Although the current average grazing intensity in the northwest QTP (around 1.0 SU/hm²) is below their average stocking rate threshold (around 1.5 SU/hm²) (Zhu et al., 2023b), the grassland management should still be given adequate attention. Because as the most arid areas with low stocking rate threshold on the QTP, the grazing intensity in this region has been increasing in recent years. Nevertheless, it must be noted that the stocking rate threshold may exceed the carrying capacity, because it is predicted to lead to an extreme grassland degradation (Zhu et al., 2023b). The GDGI dataset also showed a similar pattern between the grazing intensity data and the WorldPop data near the built-up areas, indicating higher grazing intensity around settlements than other regions on the QTP. In addition, the GDGI dataset also indicate that from 1990 to 2020, although the grazing intensity of the Plateau has generally decreased, the hotspot areas for grazing activities have remained almost unchanged. This implies that these regions should be the focus of adaptive grassland management to effectively prevent grassland degradation, mainly based on the grass–livestock balance which varies by time and space.

Encouragingly, the GDGI dataset show that the grazing intensity for two-thirds of the entire QTP grassland decreased over the past 31 years, which is also consistent with other studies (~~Sun et al., 2021;~~ Li et al., 2021; Sun et al., 2021). Recent decades of biodiversity protection, active restoration projects as well as management measures, such as nature reserves, grazing exclusion, part grazing ban combined with fencing enclosure, are believed to have driven these decrease (Deng et al., 2017; Li and Bennett, 2019). In addition, most grassland in the eastern Sanjiangyuan, the mid-eastern Changtang, and the northern foothills of the Himalayas, showed a significant decrease with grazing intensity (~~Fig.~~Figure 5e), indicating the importance of protected areas on preventing overstock and grassland degradation. Meanwhile, the GDGI maps also show that the grazing density varies greatly among protected areas, possibly owing to the difference in policy implementation. For instance, it can be seen from the GDGI maps that grazing intensity are increasing in some protected areas, especially several wetland nature reserves on the Zoige plateau (~~Fig.~~Figure 5e). Moreover, the average grazing intensity in all nature reserves on the QTP has overall increased from 1990 to 2020, although their increase rate is much lower than the non-protected areas (0.0125 SU/hm^2·10a vs 0.0304 SU/hm^2·10a), which implies that grassland management in protected areas still needs to be strengthened on the QTP.

The grazing initiatives in alignment with the Sustainable Development Goals (SDGs) on the QTP can benefit from the GDGI dataset. Firstly, determination a reasonable stocking rate is vital to prevent overstocking of the pastures, which will possibly induce extreme grassland degradation (Zhu et al., 2023b). Stocking rate determination can be optimized by using our grazing intensity maps and the stocking rate threshold maps of the QTP. Secondly, the GDGI maps can contribute to strategic placement of fence, which is a common practice adopted to prevent grassland degradation on the QTP. Building fences in areas with high grazing intensity and exceeding the carrying capacity can improve the effectiveness of fence construction (Zhang et al., 2023; Zhou et al., 2023~~; Zhang et al., 2023~~). Thirdly, the GDGI dataset can provide a solid support for promoting effective nature reserve management, which in total covering nearly one third of the entire QTP. For example, the GDGI maps

showed that grazing activities still exist in most nature reserves on the Plateau, although most of them have significantly lower grazing intensities compared with their adjacent non-protected areas. By using the GDGI maps, the conflict between ecological protection and grazing activities in nature reserves can be alleviated. Finally, our grazing intensity maps can act as a basic dataset to support other grassland-related policies. Currently, these policies on the QTP often adopt a one-size-fits-all approach to determine the carrying capacity and carry out ecological compensation, which may lead to overstock or unfair financial distribution (Wang et al., 2022). The grassland management strategies balancing carrying capacity and stocking rates are more likely to result in optimal management choices for policymakers and stakeholders, and our GDGI maps can contribute to this decision-making processes.

~~According to the GDGI maps generated in this study, high intensity grazing activities are mainly concentrated in the northeastern as well as the south-central part of the QTP, with the grazing intensity in some areas even nearly more than ten times than the average value of the entire plateau (Fig. 5b), and have exceeded the stocking rate threshold of these grasslands (Zhu et al., 2023b). Population growth and the related increasing livelihood demands is one of the main reason for this increase. To meet daily needs and enhance household income, the herders have endeavored to increase livestock, thereby intensifying grazing pressures on the grasslands over the QTP (Fang and Wu, 2022; Abu Hammad and Tumeizi, 2012). Although the current average grazing intensity in the northwest QTP (around 1.0 SU/hm²) is below their average stocking rate threshold (around 1.5 SU/hm²) (Zhu et al., 2023a), the grassland management should still be given adequate attention. Because as the most arid areas with low stocking rate threshold on the QTP, the grazing intensity in this region has been increasing in recent years. Nevertheless, it must be noted that the stocking rate threshold may exceed the carrying capacity, because it is predicted to lead to an extreme grassland degradation (Zhu et al., 2023). The GDGI dataset also showed a similar pattern between the grazing intensity data and the WorldPop data near the built-up areas, indicating higher grazing intensity around settlements than other regions on the QTP. In addition, the GDGI dataset also indicate that from 1990 to 2020, although the grazing intensity of the Plateau has generally decreased, the hotspot areas for grazing activities have remained almost unchanged. This implies that these regions should be the focus of adaptive grassland management to effectively prevent grassland degradation, mainly based on the grass–livestock balance which varies by time and space.~~

~~Encouragingly, the GDGI dataset show that the grazing intensity for two-thirds of the entire QTP grassland decreased over the past 31 years, which is also consistent with other studies (Li et al., 2021; Sun et al., 2021). Recent decades of biodiversity protection, active restoration projects as well as management measures, such as nature reserves, grazing exclusion, part grazing ban combined with fencing enclosure, are believed to have driven these decrease (Deng et al., 2017; Li and Bennett, 2019). In addition, most grassland in the eastern Sanjiangyuan, the mid-eastern Changtang, and the northern foothills of the Himalayas, showed a significant decrease with grazing intensity (Fig. 5e), indicating the importance of protected areas on preventing overstock and grassland degradation. Meanwhile, the GDGI maps also show that the grazing density varies greatly among protected areas, possibly owing to the difference in policy implementation. For instance, it can be seen from the GDGI maps that grazing intensity are increasing in some protected areas, especially several wetland nature reserves on the Zoige plateau (Fig. 5e). Moreover, the average grazing intensity in all nature reserves on the QTP has overall increased from 1990 to 2020, although their increase rate is much lower than the non-protected areas (0.0125 SU/hm²·10a vs 0.0304 SU/hm²·10a), which implies that grassland management in protected~~

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areas still needs to be strengthened on the QTP.

The grazing initiatives in alignment with the Sustainable Development Goals (SDGs) on the QTP can benefit from the GDGI dataset. Firstly, determination a reasonable stocking rate is vital to prevent overstocking of the pastures, which will possibly induce extreme grassland degradation (Zhu et al., 2023). Stocking rate determination can be optimized by using our grazing intensity maps and the stocking rate threshold maps of the QTP. Secondly, the GDGI maps can contribute to strategic placement of fence, which is a common practice adopted to prevent grassland degradation on the QTP. Building fences in areas with high grazing intensity and exceeding the carrying capacity can improve the effectiveness of fence construction (Zhou et al., 2023; Zhang et al., 2023). Thirdly, the GDGI dataset can provide a solid support for promoting effective nature reserve management, which in total covering nearly one third of the entire QTP. For example, the GDGI maps showed that grazing activities still exist in most nature reserves on the Plateau, although most of them have significantly lower grazing intensities compared with their adjacent non protected areas. By using the GDGI maps, the conflict between ecological protection and grazing activities in nature reserves can be alleviated. Finally, our grazing intensity maps can act as a basic dataset to support other grassland related policies. Currently, these policies on the QTP often adopt a one-size-fits-all approach to determine the carrying capacity and carry out ecological compensation, which may lead to overstock or unfair financial distribution (Wang et al., 2023). The grassland management strategies balancing carrying capacity and stocking rates are more likely to result in optimal management choices for policymakers and stakeholders, and our GDGI maps can contribute to this decision-making processes.identifying overgrazed areas remains an important challenge that can be effectively addressed by grazing intensity maps.

According to the GDGI maps generated in this study, high-intensity grazing activities are mainly concentrated in the northeastern part of the QTP, with the grazing intensity in some areas even nearly more than ten times than the average value of the entire plateau (Figure 5b). Therefore, there is an urgent need to optimize grassland resource management in these areas. Encouragingly, the GDGI dataset show a decreasing trend in grazing intensity over the past 31 years in about two thirds of the QTP. This trend is also consistent with other studies (Li et al. 2021, Sun et al. 2021). The areas with decreasing grazing intensity on the QTP are mainly located in the Sanjiangyuan region and the northern foothills of the Himalayas (Figure 5e).

The spatial heterogeneity of grazing intensities on the QTP may be attributed to the following reasons. First, complex geographic and climatic conditions on the QTP determine the heterogeneity of grassland, which in turn affects livestock distribution (Wang et al. 2018; Wei et al. 2022). Second, social-economic development is another important factor. In areas where social-economic development is relatively lagging behind, herders sought to increase livestock numbers in efforts to improve household incomes, leading to greater pressure on grasslands in these regions (Hammad and Tumeizi, 2012; Fang and Wu, 2022). In addition, the perceived increases in human population also resulted in the considerably increased need to more livestock numbers (Wei et al. 2022). Finally, the policy-induced reduction of livestock number might be one potential explanation for the grazing intensity decrease on the QTP. For example, Chinese government passed the Grassland Law in 1985, implemented the Grazing Withdrawal Program in 2003, approved the implementation of the Qinghai-Tibet Plateau Regional Ecological Construction and Environmental Protection Plan in 2011, and implemented the Law of the People's Republic of China on Ecological Protection of the

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~~Qinghai-Tibet Plateau in 2023. Moreover, environmental protection programs, including Grazing Withdraw Program (GWP), conversion of cropland to grassland, ecological compensation, fencing degrading grassland, and controlling the number of livestock have been implemented throughout the QTP since 2000. All these policies focused on applying grazing bans and can promote the sustainable use of grasslands, which resulted in the overall decrease of grazing intensity during the past three decades in the QTP.~~

4.~~3~~4 Uncertainties and limitations

Although this study has collected as reliable datasets as possible, users of the GDGI products should be cognizant of inherent uncertainties and limitations within these datasets. Notably, the mean relative error of the GDGI dataset spanning 1990 to 2020 was recorded at 4.2% (~~Fig.~~Figure 4a), calculated from the average errors across 182 counties within the QTP that had accessible livestock census data. Furthermore, approximately 8.26% of grassland areas exhibited a relative error exceeding 1.0 SU/hm^2 (~~Fig.~~Figure 4b). Such discrepancies arise from several limitations that were subsequently propagated to the final grazing intensity maps, thereby contributing to the dataset's overall uncertainties.

Firstly, the estimations of grazing intensities were fundamentally conservative, primarily due to the lack of comprehensive input data. Livestock numbers, derived from year-end data at the county level, inadvertently led to underestimations of grazing intensity by not accounting for livestock off-take rates. Likewise, the evaluation focused solely on livestock grazing intensity, excluding wild herbivores and forage-dependent livestock, which potentially underestimate actual grazing pressures on the QTP. Additionally, despite identifying seven main factors influencing livestock distribution, the study did not encompass all potential factors, such as fencing, forage availability, road proximity, and season transformation in grazing practices. Moreover, to align with county-scale livestock census data, we averaged the environmental factors at the county-scale. Although this approach have been widely used on the hypothesis that a consistent causal relationship between livestock intensity and environmental factors persists across various scales (Robinson et al., 2014; Nicolas et al., 2016; Li et al., 2021; Meng et al., 2023), it might oversimplify the intricate dynamics between grazing intensity and lead to a certain degree of estimation inaccuracies~~.~~. In addition, the reliance on linear extrapolation to ~~supplement~~Supplementary missing gridded 100-m population density data from 1990-1999 introduced further uncertainties due to the limited resolution (1-km) and interval (5-year) of the ChinaPop dataset.

~~There are still some uncertainties and limitations in this study. First,~~

Secondly, the modeling process for mapping grazing intensity also suffered from several challenges. For instance, the ET model was trained with a limited sample size of 4,998 and applied to a vast area consisting of 150 million pixels, which could compromise the model's accuracy. In addition, despite the ET model's design to reduce overfitting risks by using randomly selected features and partition decision, the potential for overfit effects still remained, particularly when faced with a high number of output classes or insufficient sample sizes (Geurts et al., 2006; Galelli and Castelletti, 2013). In fact, this limitation was evident in this study, as the generalization capability of the ET model was restricted by the disparity between the number of training samples and the total number of pixels, leading to predictions that often exceeded actual livestock census (~~Fig.~~Figure 4a).~~we embarked on mapping grazing intensities, but these are fundamentally conservative estimations. For example, the livestock stocking numbers utilized were from year-end data at the county scale, inadvertently leading to a possible underestimation of grazing intensity due to our inability to consider livestock off-take rates~~

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~~within the constraints of data availability. Likewise, forage-dependent livestock were not considered in our study.~~

~~Second, although seven main factors affecting livestock distribution were identified in this study, we still did not fully cover all influential factors. For instance, factors like fencing, road proximity, and grazing season transformation were not taken into account in this study, which potentially influencing the livestock distribution. Third, some baseline data also need to be improved. For example, since the gridded 100-m population density data during the 1990-1999 period were absent, we supplemented them by using linear extrapolation method. Nevertheless, as the ChinaPop dataset at 1-km resolution is at 5-year intervals, we used only four pairs of records to fit the linear model for each pixel in estimating the population at 100-m resolution in 1990 and 1995, thereby errors arising from the resampling process may have propagated further uncertainties. Last, we assessed merely the livestock grazing intensity, excluding wild herbivores, thereby potentially underestimating the actual grazing pressure on the QTP. We henceforth recommend that subsequent efforts should explore the inclusion of more detailed livestock census data, more appropriate factors, and strive for refinement in the time series persistence of key datasets.~~~~the gridded 100-m population density data during the 1990-1999 period were absent. Although we supplemented this data by using linear extrapolation method, errors arising from the resampling process may have propagated further uncertainties.~~

~~errors arising from the resampling process may have propagated further uncertainties.~~ Fourth, the ET model in this study was trained with only 4,998 samples and subsequently applied to a massive 150 million pixels, possibly compromising the accuracy of model simulations due to the lack of training samples. Thirdly, our methodological framework for high-resolution gridded grazing dataset mapping was developed based on the assumption that all grassland were accessible to livestock. However, in reality, the amount of available grassland was less due to fencing and grazing bans on the QTP (Zhan et al., 2023). Moreover, transhumant herders generally follow a seasonal calendar for summer pastures and winter pastures on the QTP. However, we did not consider this seasonal movements due to data limitations, which further restrict the analysis of seasonal livestock distribution patterns (Kolluru et al., 2023). Additionally, the model's reliance on human population as a proxy for livestock locations overlooked the possibility of high grazing intensity in areas with low human populations on the QTP, particularly in regions designated for summer pastures.

In summary, all these limitations associated with input data, the modeling process, and the methodological framework collectively contribute to the uncertainties and reduce accuracy of the GDGI maps. We henceforth recommend that future research should aim to incorporate more detailed data, consider additional influential factors, enhance key dataset's time-series consistency, and refine the methodological framework to improve the accuracy of grazing intensity mapping.~~we embarked on mapping grazing intensities, but these are fundamentally conservative estimations. For example, the livestock stocking numbers utilized were from year-end data at the county scale, inadvertently leading to a possible underestimation of grazing intensity due to our inability to consider livestock off-take rates within the constraints of data availability. Likewise, forage-dependent livestock were not considered in our study.~~ ~~Last, we assessed merely the livestock grazing intensity, excluding wild herbivores, thereby potentially underestimating the actual grazing pressure on the QTP. We henceforth recommend that subsequent efforts should explore the inclusion of more detailed livestock census data, more appropriate factors, and strive for refinement in the time series persistence of key datasets.~~

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5 Data availability

The annual gridded grazing intensity maps of the QTP spanning from 1990 to 2020 are accessible at the following link: https://doi.org/10.5281/zenodo.10851119 ~~https://figshare.com/s/ad2bbe7117a56d4fd88d~~ (Zhou et al., 202~~3~~4). Each map is catalogued by year and recorded in GeoTIFF format, with values represented in SU/hm^2 per year. These datasets, with a spatial resolution of 100 m and annual temporal resolution, utilize the WGS-1984-Albers geographic coordinate system. To streamline data transfer and download processes, the comprehensive 31-year dataset has been compressed into a ZIP file, readily available for download and compatible with Geographic Information System (GIS) software for viewing.

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~~7~~6 Conclusions

In this study, we introduce a framework utilizing ET machine learning algorithms to achieve fine-scale livestock spatialization, subsequently generating the GDGI dataset across the QTP. The GDGI has a spatial resolution of 100 m and expands 31 years from 1990 to 2020. It is consistent with livestock census data of the QTP, ~~and can better highlight grazing intensity details,~~ and has a relatively higher precision than previous datasets with MAE of 0.006 SU/hm^2 based on 4,998 independent test samples. ~~The MAE for the QTP is 0.006 SU/hm^2 based on 4998 independent test samples.~~ In addition, the accuracy evaluations at both pixel~~county~~-level and township-level underscore the outstanding reliability and applicability of the GDGI dataset, which can successfully capture the spatial heterogeneity and variation in grazing intensities in greater details. Moreover, comparisons between the GDGI dataset and other existing grazing map products further proved the robust and efficient of our dataset, and demonstrate the validity of the proposed framework in the research of livestock spatialization. The GDGI dataset presented in this study can address existing limitations and enhance the understanding of grazing activities on the QTP. This, in turn, can aid in the rational utilization of grasslands and facilitate the implementation of informed and sustainable management practices.

~~Supplement~~Supplementary.

For gridded datasets influencing grazing that are not directly available, or that do not meet spatio-temporal resolution requirements—such as those pertaining to population density, temperature, precipitation, and HNPP—we have delineated the processing or creation procedures in the ~~Supplement~~Supplementaryary file.

Author contributions.

T.L. conceived the research; J.Z. and J.N. performed the analyses and wrote the first draft of the paper; N.W. and T.L. reviewed and edited the paper before submission. All authors made substantial contributions to the discussion of content.

Competing interests.

The authors declare that they have no conflict of interest.

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Supplement of

Annual high-resolution grazing intensity maps on the Qinghai-Tibet Plateau from 1990 to 2020

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Supplementary ~~Methods~~information

There is a conspicuous absence of a systematic database with superior spatio-temporal resolution, including population density, temperature, precipitation, and Human-activity-induced Net Primary Productivity (HNPP). The lack of such a comprehensive dataset significantly compromises the empirical robustness of research endeavors in the domain of livestock distribution mapping. Consequently, this study is committed to providing precise and detailed mappings that integrate the aforementioned elements. The subsequent section demonstrated the database and the methodologies employed to generate these comprehensive maps.

Population density database

Data source~~.~~

The gridded annual population data with a resolution of 100 m spanning from 2000 to 2020 (referred to as Pop I) for this study were acquired from the WorldPop dataset (https://hub.worldpop.org, accessed on 5 January 2023). Concurrently, the gridded population data at 1 km resolution with five-year intervals for the period of 1990-2015 (referred to as Pop II) were obtained from the Resource and Environment Science and Data center of the Chinese Academy of Sciences (https://www.resdc.cn, accessed on 9 January 2023). Moreover, the demographic data spanning the years 1990-2000 were extracted from the statistical yearbooks of the respective provinces.

Data processing~~.~~

All collected gridded population data were meticulously geo-referenced to the WGS_1984_Albers Equal-Area Conic coordinate system, and were subsequently clipped by the comprehensive boundary of the entire Qinghai-Tibetan Plateau (QTP). Furthermore, the Pop_II dataset was aggregated to a 100 m resolution to maintain consistency. Given the inherent disparities between the Pop I and Pop II datasets—originating from distinct demographic data and divergent methodologies—an integration process was required to prevent data breakage and ensure continuity across datasets. In this study, for the overlapping year of 2000-2015, both Pop I and Pop II data were harmoniously amalgamated to construct a linear regression model, according to the formula 1~3. Subsequently, consistent gridded population data with a spatial resolution of 100 m × 100 m, were generated by linear extrapolation for the years 1990 to 1999, undergoing stringent quality control procedures utilizing the acquired demographic data. Thus, a comprehensive set of population distribution maps with a spatial resolution of 100 m × 100 m were successfully acquired, covering 31 years from 1990 to 2020.

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$$y = ax + b \quad (1)$$

$$a = \frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{\sum_{i=1}^{n}(x_i-\bar{x})} \quad (2)$$

$$b = \bar{y} - a\bar{x} \quad (3)$$

where y is Pop I, X is Pop II, and n is the number of samples.

Climate database

Data source

In the present study, the mean daily temperature and precipitation data of 228 meteorological stations in the QTP and its surrounding areas during 1990-2020 were obtained from China Meteorological Data Service Center (http://data.cma.cn, accessed on 4 January 2023). The quality and uniformity of the acquired data were assessed and validated by the National Meteorological Information Center, ensuring the reliability and consistency of the datasets in use.

Data processing

To avoid the influence of anomalous values, average values were selected for interpolation of air temperature, while interpolation of precipitation incorporated total values (Bryan and Adams, 2002). Subsequent to the exclusion of abnormal data, the annual average temperature and the annual cumulative precipitation for each station were ascertained. Previous studies reveals that both the ANUSPLIN and Co-Kriging methodologies are typically conducive to generating robust and reliable estimations for climatic data (Parra and Monahan, 2008; Cho et al., 2020; Tan et al., 2021). Consequently, after comparing the results from all possible parameter combinations, eight models were constructed with three independent variables, including altitude, slope, and aspect, as detailed in Table S1.

The ANUSPLIN model serves as an advanced interpolation technique, proficient in generating geographically cohesive climate surfaces, utilizing both weather station data and topographical variables. This model is constructed employing thin-plate smoothing splines, demonstrating a notable suitability for interpolating climate data characterized by substantial noise, whilst maintaining a propensity to yield a mean error that is lower compared to alternate interpolation models (Price et al., 2000; Hutchinson et al., 2005). The theoretical framework underpinning this model is articulated through Formula (4), serving as a testament to its mathematical robustness and empirical reliability in addressing the complexities inherent to climatic data.

$$Z_i = f(x_i) + b^T y_i + e_i \quad (i=1,\ldots,n) \quad (4)$$

where Zi represents the predicted value at location i; x_i is the spline independent variable as a multidimensional vector, and f represents a smoothing function of x_i which needs to be estimated; y_i is the independent covariable as a multidimensional vector, and b is the unknown coefficients

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for the y_i; *n* is the number of observational data. Each *ei* is an independent, zero mean error term with variance $w_i\sigma^2$, where w_i is the known relative error variance and σ^2 is the error variance which is constant across all data points.

Co-Kriging represents a sophisticated multivariate geo-statistical technique, functioning as an advanced extension of the Ordinary Kriging method, and is adept at transitioning from a singular spatial random variable to encompassing multiple spatially correlated random variables. This technique incorporates multiple correlated datasets into the estimation process, typically resulting in predictions characterized by enhanced accuracy (Tajgardan et al., 2010). The mathematical theory underpinning Co-Kriging is delineated in Formula (5).

$$Z^*(x_0) = \sum_{i=1}^{n_1} \beta_{1i} Z_1(x_{1i}) + \sum_{j=1}^{n_2} \beta_{2j} Z_2(x_{2j}) + \sum_{p=1}^{n_3} \beta_{3p} Z_3(x_{3p}) + \sum_{q=1}^{n_4} \beta_{4q} Z_4(x_{4q}) \quad (5)$$

where $Z^*(X_0)$ is the simulated value of the point X_0 to be evaluated, the measured climate value of Z_1 (x_{1i}) is taken as the main variable, and Z_2 (x_{2j}), Z_3 (3_i) and Z_4 (x_{4i}) are taken as the covariates; β represents the weight; *n* represents the number of data; X_i, X_J, X_P and Xq represent the location, and $I = 1, 2, 3..\ n1, j=1,2,3\cdots\cdots n2, p=1,2,3\cdots\cdots n3, q=1,2,3\cdots\cdots n4$.

Table S1. Interpolation models using different combinations of covariates for prediction of air temperature and precipitation.

Climate		ANUSPLIN		Co-Kriging
Temperature	A-T-I	CV： Altitude	K-T-I	CV： Altitude
	A-T-II	CV：Altitude; slope; aspect	K-T-II	CV： Altitude; slope; aspect
Precipitation	A-P-I	CV： Altitude	K-P-I	CV： Altitude
	A-P-II	CV：Altitude; slope; aspect	K-P-II	CV： Altitude; slope; aspect

Note: CV is an abbreviation for concomitant variable

Model assessment

To rigorously evaluate the efficacy of the eight models, we engaged in the construction and assessment of all predictive models utilizing repeated 10-fold cross-validation (Yoo et al., 2018). This method systematically divided the original observation data from the 228 meteorological stations into ten equitably sized subsamples. Nine of these subsamples were deployed in the training process, subsequently generating predictions on the remaining subsample. This cross-validation process was then repeated a further nine times, ensuring each observation was exclusively used once as validation data. Hence, ten distinctive combinations of training and test

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sets were established, with each pair undergoing comprehensive application and evaluation. The conclusive assessment of the 10-fold cross-validation was derived from the average error across the ten test sets, culminating in a singular, consolidated estimate.

The mean absolute error (MAE) and the root mean square error (RMSE) were employed as evaluation metrics to quantify the discrepancies between the forecasted data and the actual observed data, serving as indicators of model performance. The MAE and RMSE were computed for 56,544 (228×31×8) samples, as detailed in Table S2, to systematically assess the accuracy of the models. The optimal model was adjudged based on the relative minimization of both MAE and RMSE during the modeling and forecasting stages. The results indicated that the A-T-II model exhibited superior performance in predicting temperature, whereas the K-P-I model demonstrated paramount accuracy in forecasting precipitation. Consequently, the A-T-II and K-P-I models were deployed to construct the annual temperature and precipitation maps of the QTP spanning the period from 1990 to 2020, as illustrated in Figure S2.

Table S2. Model performance for the response prediction models

Climate	Temperature				Precipitation			
Models	A-T-I	A-T-II	K-T-I	K-T-II	A-P-I	A-P-II	K-P-I	K-P-II
Test samples	7068	7068	7068	7068	7068	7068	7068	7068
MAE	1.506	0.998	1.89	1.91	109.509	110.614	99.05	99.47
RMSE	2.75	1.551	2.54	2.55	172.770	175.483	147.28	147.68

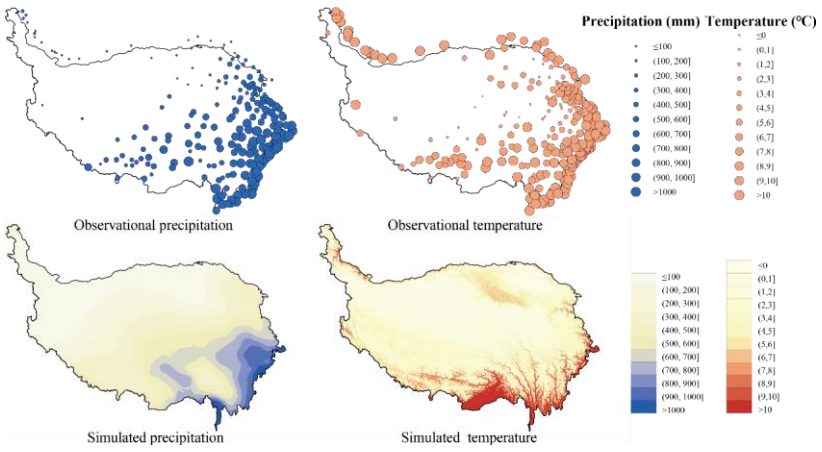

Figure S1. Distribution of mean cumulative precipitation and mean temperature in the QTP as predicted by K-P-I and A-T-II model, respectively

Human-activity-induced Net Primary Productivity (HNPP) database

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Data source.

The MOD17A3HGF Version 006 NPP product (referred to as NPP-I) with 500 m resolution covering 2000 to 2020 were obtained from the Land Processes Distributed Active Archive Center (https://lpdaac.usgs.gov, accessed on 18 January 2023). Additionally, the actual NPP dataset during 1990-2015 at 1 km resolution (referred to as NPP-II) was derived from the Global Change Research Data Publishing and Repository~~MOD17A3 NPP product~~ (http://www.geodoi.ac.cn~~http://www.ntsg.umt.edu~~, accessed on 22 January 2023).

Data processing.

To reconcile the discrepancies inherent between NPP-I and NPP-II datasets, an initial re-projection to the WGS_1984_Albers Equal-Area Conic coordinate system was undertaken. Subsequently, the resolution of NPP-II was resampled to 500-m through the employment of the nearest neighbor resampling algorithm. Based on the NPP-I and NPP-II data for the overlapping year of 2000-2015, a linear regression correction equation was established in accordance with formula 1~3. Consequently, the consistent gridded NPP data (referred to as NPP-III) at 500 m × 500 m spatial resolution from 1990 to 2000 was generated.

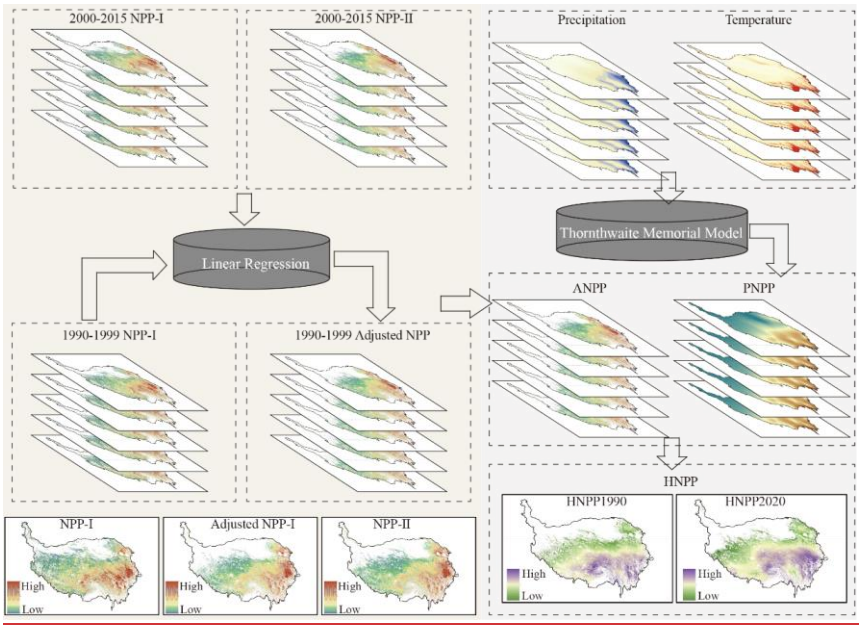

Figure S2. Technical flowchart for mapping the HNPP on the QTP

Human-induced NPP (HNPP) is delineated by the discrepancy between the climate-driven potential NPP (PNPP) and the actual NPP (ANPP). In this study, the NPP-III data epitomize the

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ANPP, elucidating the extant conditions of vegetative growth. To estimate the PNPP, the Thornthwaite Memorial model was utilized, incorporating temperature and precipitation as determining variables (Naeem et al., 2020; Qin et al., 2021). Subsequently, the differentiation between PNPP and ANPP was performed to manifest the influence of human activities on NPP. HNPP values in the negative spectrum indicate gains in NPP attributable to anthropogenic activities, while positive values represent losses in NPP due to human interventions. The computations for PNPP and HNPP were conducted as outlined below:

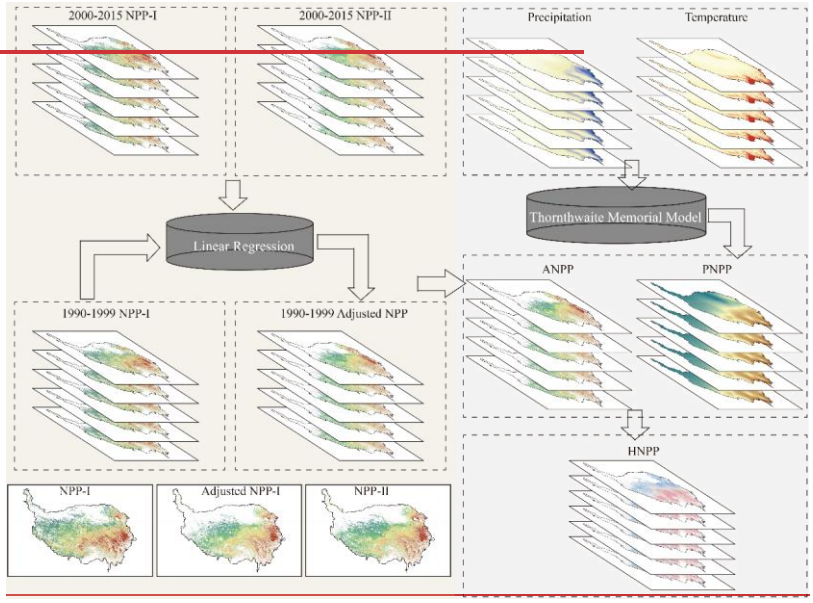
$$\mathrm{PNPP} = 3000\left[1 - e^{-0.0009695(v-20)}\right] \quad (6)$$

$$v = \frac{1.05r}{\sqrt{1+\left(1+\frac{1.05r}{L}\right)^2}} \quad (7)$$

$$L = 3000 + 25t + 0.05t^3 \quad (8)$$

$$HNPP = PNPP - ANPP \quad (9)$$

where PNPP represents the total annual potential NPP (g C m^{-2}), *v* represents the annual mean actual evapotranspiration (mm), *L* represents the annual mean potential evapotranspiration (mm), *r* represents the annual precipitation (mm) and *t* represents the average annual temperature (° C).



~~Figure S2. Technical flowchart for mapping the HNPP on the QTP~~

Machine Learning Methods

Support vector regression

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Support vector regression (SV) extends the concepts of support vector machines to regression problems (Cortes and Vapnik, 1995). It functions by establishing a hyperplane that predicts continuous outputs while minimizing errors between predicted and actual values. Key elements in SV include the margin and support vectors. The margin provides a tolerance for error, and the support vectors are essential data points dictating the hyperplane's position. Notably effective for high-dimensional feature spaces, SV is adept at handling nonlinear relationships (Smola and Schölkopf, 2004), making it highly relevant in advanced geographic data analysis.

K-nearest neighbors

K-nearest neighbors (KNN) is a proximity-based algorithm that predicts data point values based on their nearest neighbors (Cover and Hart, 1967; Bermejo and Cabestany, 2000). Unique for requiring no explicit model training, KNN calculates the distance between features, making it flexible and suitable for small datasets where other models' assumptions may not apply. KNN is straightforward and easy to implement, but its performance heavily depends on the quality and dimensionality of the dataset.

Gradient boosting regression

Gradient boosting regression (GB) is an ensemble learning technique constructing decision trees in sequence, each designed to rectify the errors of the previous (Friedman, 2001). Employing gradient descent to minimize the loss function, GB enhances flexibility and accuracy in data modeling, excelling at handling complex nonlinear relationships. It has demonstrated excellent performance in many real-world problems, especially with large datasets.

Random Forests

Random forests (RF) is an ensemble learning technique enhancing accuracy and robustness by building multiple trees and aggregating their predictions (Breiman, 2001). Each tree in RF is trained on a random subset of the dataset, reducing the risk of overfitting. RF is particularly effective in handling datasets with complex interactions and non-linearities (Ahmad et al., 2018).

Extra trees regression

Extra trees regression (ET) algorithm is a machine learning technique evolved from the random forests model (Geurts et al., 2006). It introduces more randomness in decision tree construction, and selects split points randomly rather than seeking optimal splits. This method builds more trees in the process to improve prediction accuracy and to lower overfitting risks. Unlike the random forests algorithm, ET utilizes the entire training dataset to train each regression tree, thereby reducing variance and enhancing generalization. This makes ET particularly effective for large and

high-dimensional datasets (Ahmad et al., 2018).

Validation datasets

In this study, both the township-level census livestock data and the pixel-level observed livestock data were used for validation of the GDGI maps. Specifically, the township-level census livestock data involves 18 townships with a total of 112 records, which were collected from government documents. The validation data at the pixel scale also encompass a total of 112 records from 68 sites, which were collected from literatures, questionnaires and field surveys. The detailed information for the validation datasets can be seen from Figure S~~1~~3 and Table S3.

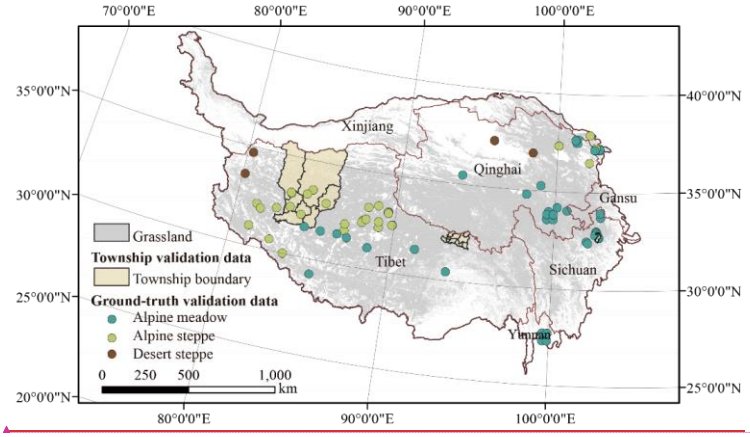

Figure S3. Spatial distribution of township validation data and ground-truth validation data.

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Table S3. Summary of the ground-truth validation data from questionnaires, governmental documents and literatures.

Longitude	Latitude	Grazing intensity	Mean grazing intensity (Sheep/hm^2)	Grassland types	Source	Time
89.8618	32.4513	0.009 Sheep/hm^2	0.009	AS	Questionnaires	2021
89.8696	32.4541	0.005 Sheep/hm^2	0.005	AS	Questionnaires	2021
89.8500	32.4497	0.101 Sheep/hm^2	0.101	AS	Questionnaires	2021
88.0284	32.4546	0.167 Sheep/hm^2	0.167	AS	Questionnaires	2021
89.5161	33.0806	0.021 Sheep/hm^2	0.021	AS	Questionnaires	2021
89.5261	33.0745	0.001 Sheep/hm^2	0.001	AS	Questionnaires	2021
87.9553	32.3468	0.196 Sheep/hm^2	0.196	AS	Questionnaires	2021
89.5039	33.0643	0.073 Sheep/hm^2	0.073	AS	Questionnaires	2021
89.5169	33.0152	0.015 Sheep/hm^2	0.015	AS	Questionnaires	2021
84.5724	33.5086	0.138 Sheep/hm^2	0.138	AS	Questionnaires	2021
84.5764	33.5173	0.168 Sheep/hm^2	0.168	AS	Questionnaires	2021
83.2922	33.1169	0.013 Sheep/hm^2	0.013	AS	Questionnaires	2021
83.3174	33.1207	0.321 Sheep/hm^2	0.321	AS	Questionnaires	2021
83.2653	33.1603	0.014 Sheep/hm^2	0.014	AS	Questionnaires	2021
102.013-102.171	32.289-32.569	49660 Sheep unit	2.222	AM	Governmental documents	2008
101.993-102.122	32.384-32.626	34950 Sheep unit	1.766	AM	Governmental documents	2008
102.475-102.819	32.957-33.137	83936 Sheep unit	2.983	AM	Governmental documents	2008
102.616-102.934	32.468-32.971	74860 Sheep unit	1.705	AM	Governmental documents	2008
102.650-102.967	32.563-32.995	92840 Sheep unit	2.318	AM	Governmental documents	2008
93.5000	30.4500	NG:0/MG:1.875/HG:2.78 (Sheep/hm^2)	1.552	AM	Xu et al., 2012	2010-2011

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102.5810	32.8331	0.52/1.016/1.284/1.668 (Sheep/ hm^2)	5.610	AM	Tserang et al., 2016	2014
102.5200	37.2800	1.64 Sheep/hm^2	1.640	AS	Shi et al., 2013	2002-2010
100.0667	37.3500	NG:0/LG:1.72/MLG:2.29/MG:2.87/ MHG:4.13/HG:5.62 (Sheep/ hm^2)	2.772	AS	Chu et al., 2019	2010-2015
101.1667	37.6500	LG:2.55/HG:5.35 (Sheep/ hm^2)	3.950	AM	Cao et al., 2004	1985-1999
102.4600	37.1800	G:7-8 NG:0 (Sheep/ hm^2)	4.000	AM	Wang et al., 2020	2005-2017
80.1440	33.5344	NG	0	DS	Meng et al., 2023	2021
80.3398	34.6949	NG	0	DS	Meng et al., 2023	2021
84.2821	33.2489	NG	0	AS	Meng et al., 2023	2021
85.5507	32.9491	NG	0	AS	Meng et al., 2023	2021
83.3801	32.4206	NG	0	AS	Meng et al., 2023	2021
81.3056	32.1976	NG	0	AS	Meng et al., 2023	2021
81.1381	31.0308	NG	0	AS	Meng et al., 2023	2021
82.5525	30.5754	NG	0	AS	Meng et al., 2023	2021
83.5271	30.0013	NG	0	AS	Meng et al., 2023	2021
86.9538	31.7750	NG	0	AS	Meng et al., 2023	2021
81.5937	32.0056	NG	0	AS	Meng et al., 2023	2021
82.5718	32.2185	NG	0	AS	Meng et al., 2023	2021
84.1376	32.1522	NG	0	AS	Meng et al., 2023	2021
84.5005	31.5758	NG	0	AM	Meng et al., 2023	2021
85.5255	31.5193	NG	0	AM	Meng et al., 2023	2021
86.5660	31.5314	NG	0	AM	Meng et al., 2023	2021
86.9267	32.1150	NG	0	AS	Meng et al., 2023	2021
87.1824	31.4253	NG	0	AM	Meng et al., 2023	2021
88.5406	31.1014	NG	0	AM	Meng et al., 2023	2021

88.1928	32.5347	NG	0	AS	Meng et al., 2023	2021
88.2523	33.1545	NG	0	AS	Meng et al., 2023	2021
85.3522	29.2292	NG	0	AM	Meng et al., 2023	2021
89.0365	32.2235	NG	0	AS	Meng et al., 2023	2021
88.9974	32.5153	NG	0	AS	Meng et al., 2023	2021
88.8447	33.3245	NG	0	AS	Meng et al., 2023	2021
91.4499	31.3858	NG	0	AM	Meng et al., 2023	2021
95.7602	37.3968	NG	0	DS	Meng et al., 2023	2021
93.8996	35.4687	NG	0	AM	Meng et al., 2023	2021
98.3783	36.9244	NG	0	DS	Meng et al., 2023	2021
99.0157	35.2812	NG	0	AM	Meng et al., 2023	2021
101.213-101.381	37.480-37.751	G:3.51 NG:0 (Sheep/ hm^2)	1.755	AM	Zou et al., 2016	2005
102.125-103.771	36.521-37.922	NG:0 MG:4.86 HG: 6.08 (Sheep/ hm^2)	3.647	AM	Li et al., 2015	2010-2014
99.601-99.892	27.331-27.720	NG:0 CG:3.5 GR:3.5 (Sheep/ hm^2)	2.333	AM	Lang et al., 2021	2011
99.506-99.911	33.573-33.822	1.26 (Sheep/ hm^2)	1.260	AM	Dong et al., 2014	1998-2000
102.660-102.781	37.181-37.230	2.75/3.63/4.36/4.78/5.19/7.2 (Sheep/ hm^2)	4.652	AM	Niu et al., 2018	2012-2015
100.561-102.130	34.751-35.530	LG:0.95 MG:2.65 HG:7.1 (Sheep/ hm^2)	3.567	AM	Li et al., 2018	2016
99.934-99.308	34.009-35.617	338400 Sheep unit	0.152	AM	Yu et al., 2021	2018
99.461-99.781	33.757-34.184	51800 Sheep unit	0.606	AM	Gu and Zhou, 2020	2018
99.620-100.406	33.393-34.410	223100 Sheep unit	1.590	AM	Gu and Zhou, 2020	2018
100.576-100.877	33.879-34.246	166900 Sheep unit	2.876	AM	Gu and Zhou, 2020	2018

95.401-101.649S	33.106-37.477	0.9 Sheep/ hm^2	0.900	AM	Wu et al., 2021	2017
102.802-102.977	33.883-34.026	50180 Sheep unit	4.001	AM	Zhuang et al., 2019	2014
102.822-103.016	33.627-33.835	91000 Sheep unit	3.778	AM	Zhuang et al., 2019	2014

Note: G: Grazing; **GR**: Grazing Rest; **NG**: No Grazing; **LG:** Light Grazing; **MG**: Moderate Grazing; **MLG**: Moderate Light Grazing; **MHG**: Moderate Heavy Grazing; **HG**: Heavy Grazing; **CG**: Continuous Grazing.

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Table S4. Information for sample data in grazing intensity modeling (Utilizing sklearn.model_selection for train-test data splitting in Python)

NO.	Altitude	Slope	River	Precipitation	Temperature	Population	HNPP	GI-Census(Log)
1	4446.90152	20.43149	11006.43992	770.45115	3.50504	0.01630	917.63410	0.24204
2	3770.28849	9.61628	8339.14135	537.13063	0.04115	0.04908	511.12892	0.51675
3	5001.44076	7.74284	14791.45433	165.85065	-2.33546	0.00174	236.51765	0.07044
4	2903.17984	16.52171	14819.15033	482.85342	4.19267	0.19979	472.12443	0.74271
5	5113.12414	10.95940	14450.81322	128.26504	0.48100	0.00239	159.01233	0.16180
6	2924.23004	24.91102	7038.98535	567.45789	6.04342	0.16518	390.99603	0.92462
7	3895.67986	13.42678	11277.98388	363.69126	-1.60045	0.03262	383.03021	0.38149
8	4399.20601	6.55008	7976.83163	301.44693	-2.76176	0.00269	407.55275	0.10408
9	4888.34198	9.38470	12650.10673	419.59899	3.37497	0.01821	626.26893	0.26780
10	3864.32265	24.38751	6318.52530	951.28458	4.55532	0.02054	902.22597	0.71049
11	3118.94490	15.65389	6723.93485	376.98985	2.02617	0.01529	349.00571	0.28136
12	3487.69070	18.86305	18731.23211	397.47683	-0.51635	0.05043	335.59765	1.68134
13	4477.05225	21.03200	9253.04522	535.91400	2.96043	0.04643	688.07608	0.34109
14	4877.06651	16.84761	8582.25708	438.52231	3.45691	0.05628	578.07802	0.33517
15	4059.02316	19.79821	15623.81309	79.83006	3.73931	0.01716	43.91666	1.06909
16	2896.45573	16.42350	14610.96038	444.55866	3.93272	0.18171	382.22515	0.64863
17	3338.74606	24.30527	11591.42467	447.92464	3.76303	0.06516	316.09493	0.48510
18	4552.82016	17.75626	8429.78755	363.43741	1.17927	0.02670	462.07952	0.31255
19	4046.46223	9.26426	11319.31895	174.17217	-0.31321	0.00827	197.78352	0.17766
20	3807.13648	25.62871	7378.74657	88.18474	5.04975	0.00631	37.99118	1.28572
21	4677.36459	18.91047	12312.45501	654.19702	2.99837	0.04386	823.36585	0.38494
22	4957.65466	6.62716	10614.12073	397.62929	-3.05608	0.00615	579.37226	0.19741
23	4052.85072	9.04663	11530.25892	252.16538	-1.98410	0.00631	342.52216	0.12117
24	4672.07309	16.64215	17913.94075	410.79052	3.67608	0.08547	563.82705	0.47060
25	4687.98650	13.73783	9807.12273	430.75445	4.20260	0.02153	538.47848	0.24659
26	3854.66063	13.90955	11325.54119	352.24327	-1.16001	0.03577	366.38780	0.49083
27	4607.69968	22.31451	8622.89579	639.65712	2.28363	0.06153	781.87546	0.35652
28	4523.82042	20.86194	11807.67970	746.59722	4.67632	0.01680	896.62669	0.30509
29	3625.40015	23.27223	5151.50669	663.11759	7.93027	0.08417	682.10846	0.45454
30	4888.51509	19.85724	11149.23429	300.62776	3.87022	0.06530	393.80276	0.38955
31	3644.85375	23.95199	10466.56382	1584.40960	6.67028	0.04681	1325.53359	1.13865
32	4844.57505	15.30717	9382.30551	389.13571	1.52752	0.02496	564.37303	0.31485
33	3425.64280	24.54749	7993.34112	51.30005	4.00438	0.00891	10.16623	1.96626
34	4556.01583	22.53164	12895.51729	685.95674	5.32661	0.02437	840.76989	0.39400
35	4478.71176	21.02706	9267.76533	543.45040	3.22512	0.04653	713.93142	0.29488
36	3475.62196	13.91179	7303.12066	494.83019	2.47942	0.05638	441.33700	0.57810
37	4492.02394	15.12905	23375.09230	83.48786	-1.24101	0.00026	60.49678	0.44449
38	4899.55448	16.87605	8791.49435	319.29671	1.76846	0.04729	400.78336	0.42886
39	4371.67200	20.47126	9895.07478	484.26034	2.23295	0.04200	526.65473	0.43310
40	4787.10961	22.26842	10671.48190	298.49400	2.65954	0.04879	337.49591	0.51326
41	4013.07971	9.86336	12322.53461	180.17236	-1.57204	0.00339	190.98626	0.23629
42	4886.40282	9.34164	12599.12656	419.56983	2.16220	0.01982	627.98816	0.22017
43	4623.53280	7.72824	16800.19193	130.99845	-3.43838	0.00002	166.61843	0.07346
44	4372.80351	20.42203	9915.83606	540.63964	2.73312	0.04921	614.84515	0.38109
45	4958.28571	6.65071	9530.13454	355.37533	-2.11523	0.00611	503.33810	0.19387
46	3380.32022	9.62268	6930.55262	408.50182	2.38924	0.06102	421.79446	0.53246
47	4333.71413	17.21727	8152.26370	468.14700	3.54024	0.04346	434.22047	0.40122
48	4339.13611	16.11054	9338.45563	421.95098	5.75737	0.10431	584.07742	0.46658
49	3392.64069	11.70084	7590.21202	511.09524	1.56615	0.08480	439.88825	0.59589
50	3754.58569	12.28700	6485.05843	455.75517	-1.11378	0.01487	521.43653	0.38250
51	4631.78811	7.84924	18259.38838	96.10551	-4.90481	0.00005	98.41642	0.36332
52	2496.01483	14.76789	4067.42358	406.75240	5.34966	0.33760	390.20947	0.53611
53	4763.06223	14.80908	11467.01749	432.74641	3.90698	0.02431	629.57781	0.35577
54	5119.83151	10.92640	10007.48752	66.91673	-3.15524	0.00067	52.39515	0.72715
55	4705.42114	19.15174	9749.86479	431.25119	-0.17284	0.04401	547.64164	0.30572
56	5093.51508	13.19370	12512.20828	73.51966	-2.22821	0.00100	61.55753	0.41019
57	3217.94491	14.56054	10005.23668	432.45510	3.19881	0.08487	462.48338	0.43966
58	4876.30469	16.85070	8585.91763	533.68725	2.27398	0.05639	712.13146	0.40458
59	3572.18295	17.66564	7374.35008	497.46869	0.59456	0.09411	487.87023	0.78476
60	4146.91891	16.37918	9013.71164	711.63597	-0.19855	0.01772	785.75542	0.41913
61	4340.26455	21.90733	8702.82731	774.88148	2.85509	0.04352	777.23197	0.54626
62	3383.37631	24.43785	11958.11460	581.72966	2.74947	0.04952	500.44999	0.65109
63	4766.29194	14.79944	9575.37641	388.72270	4.59679	0.02756	565.76276	0.34042
64	4572.74206	7.59560	8659.09378	297.24144	-1.54067	0.00430	419.68328	0.07145
65	4572.04667	18.01295	8206.40028	504.25146	2.77890	0.03076	661.96192	0.24001

66	4465.33953	11.99740	16290.16489	92.55052	-2.99424	0.00028	87.82467	1.13861
67	4511.76598	21.15357	10003.33011	522.99115	5.17913	0.10394	639.67569	0.51623
68	4198.44154	21.03738	10545.13681	739.62516	2.69903	0.03273	775.90685	0.52148
69	4780.53720	10.44010	11763.89315	542.76206	-1.36267	0.00835	741.82528	0.10876
70	5003.57321	7.80377	13085.32744	196.50875	1.99661	0.00230	288.83322	0.06015
71	3734.68468	25.74610	7252.88314	83.63831	4.45243	0.00576	31.87992	1.33830
72	4254.42146	23.27263	13469.76886	639.74801	3.84719	0.00931	769.00756	0.13477
73	4748.03191	14.79096	9633.70762	360.96910	3.02101	0.05646	496.38078	0.58472
74	4967.90599	10.95393	10258.79893	92.77317	2.56083	0.00328	77.70368	0.24962
75	4966.88784	9.86131	8828.39250	421.12480	0.49827	0.00710	601.06709	0.15703
76	4786.68816	22.26626	10689.04538	456.47220	3.94374	0.05075	573.86344	0.51523
77	4146.37156	16.46386	8934.85365	644.19429	1.54690	0.02422	713.18882	0.40763
78	3765.75544	24.15675	10864.49137	756.42277	3.24461	0.05255	670.65433	0.78486
79	4959.17088	6.67289	9718.30805	435.46817	0.48992	0.00872	617.01622	0.17021
80	4688.16548	18.39575	16696.64996	397.94119	3.50044	0.03016	545.07137	0.18046
81	4037.44232	9.20865	11378.59464	242.16327	-0.31398	0.00898	321.20714	0.13276
82	4401.86095	6.54648	8144.62633	373.46970	-2.49796	0.00257	500.99477	0.10926
83	4678.50496	20.15657	7822.64818	362.78485	5.45355	0.04721	502.17395	0.24689
84	3165.78198	15.79353	12079.18523	274.72097	3.27322	0.10547	163.84973	0.73815
85	3671.07133	14.08565	9976.94171	543.44014	1.18157	0.06699	573.96320	0.66264
86	3392.87083	11.71110	7598.88649	646.72270	1.74712	0.08655	602.86078	0.57709
87	4543.77636	20.94813	15735.52090	520.21179	2.63260	0.01151	624.20338	0.24881
88	4769.92824	8.15774	9890.50657	312.73325	-3.73356	0.00269	455.92995	0.06817
89	4281.54207	14.17831	6879.08077	580.36154	-1.50816	0.01968	669.50700	0.44057
90	4790.47460	10.24662	11221.01291	481.84642	0.30809	0.02619	615.53724	0.40531
91	4665.92566	18.80354	12288.40497	530.98019	5.31213	0.04098	654.69244	0.35129
92	3308.28730	14.67353	11507.09765	398.10094	2.43920	0.08016	386.64394	0.49179
93	4891.68718	12.74416	7296.51834	465.79121	3.44313	0.04009	622.00371	0.28087
94	4822.85684	20.85203	7814.59131	548.99906	2.11853	0.04565	701.22576	0.42777
95	3984.09729	16.77696	5618.91465	385.57864	-2.51922	0.02608	427.42365	0.78349
96	4290.05509	17.67454	7533.29003	790.62528	3.25964	0.05017	802.02076	0.43190
97	4530.18662	22.73712	7983.18474	541.79965	3.83465	0.13557	635.61550	0.71488
98	3221.54163	14.56333	10095.99632	291.86286	3.50999	0.08618	236.01536	0.45285
99	4813.81414	20.77926	7724.65340	688.29559	3.39337	0.05172	855.45991	0.38271
100	4400.91661	6.54424	7997.85597	352.28006	-3.09554	0.00285	461.43778	0.16739
101	3158.76354	20.03414	10455.18056	549.58574	4.59408	0.14320	408.55220	1.27886
102	4521.85112	20.86383	11800.81299	739.56660	4.04306	0.01622	881.48629	0.28929
103	4514.12431	19.82820	7359.92484	624.22094	2.36024	0.04970	758.30461	0.36715
104	4738.53054	21.71254	10161.53186	514.89583	3.93836	0.07325	640.69663	0.47473
105	2918.94433	16.77453	14678.04455	391.64259	4.05391	0.24244	303.52029	0.63278
106	3427.18496	8.09147	12858.94974	385.84899	2.25306	0.03786	377.44102	0.40595
107	3741.94119	11.74971	7154.14735	534.36733	1.89050	0.02569	475.45106	0.51490
108	4769.38433	8.14280	9538.26840	309.69680	-1.82254	0.00278	447.44324	0.06371
109	4379.82124	18.88765	8601.50377	645.98974	1.14801	0.03828	726.24396	0.36256
110	4774.10947	10.19383	11618.08823	438.46413	-1.94290	0.00761	588.32915	0.17749
111	4712.70396	15.85400	11386.97828	370.14994	5.06546	0.05608	470.68426	0.37695
112	4679.79446	24.51845	8689.99123	361.33187	4.55552	0.06086	385.43617	0.97708
113	3517.59684	9.38766	8274.29396	370.41858	-0.02109	0.03268	283.30877	0.46491
114	5020.93161	13.81018	8430.20193	379.98746	1.81525	0.01560	562.04150	0.19907
115	3536.42705	19.31930	19709.54661	458.66548	0.06944	0.07011	440.55382	0.70340
116	4329.99845	15.95497	9235.86556	460.01850	5.96722	0.11438	616.98005	0.46145
117	4280.43654	14.18537	6852.49119	645.13921	0.19905	0.03223	761.85998	0.26508
118	3341.02281	24.27669	11631.38314	566.66947	4.30858	0.06403	467.83869	0.56090
119	4004.59602	9.82238	9365.43820	274.14032	-2.73653	0.00753	334.18984	0.21692
120	4397.55743	6.49020	7819.76103	472.87590	-1.38674	0.00411	647.13827	0.04918
121	5073.88451	13.12981	12425.25012	118.28662	-2.54388	0.00115	152.04813	0.39697
122	4832.20669	14.41317	10762.16363	417.80952	4.17966	0.03411	620.15532	0.19609
123	4367.57546	18.80371	9615.06369	652.93165	3.13412	0.04329	751.42663	0.35336
124	4423.36105	11.47278	8399.61018	668.29961	0.19220	0.01495	792.34032	0.17241
125	3515.91183	9.35763	8280.20807	412.88525	-0.51270	0.02819	338.01988	0.46710
126	5112.92016	10.96345	14657.84353	127.90302	-0.25075	0.00272	166.22878	0.11007
127	4779.30025	10.39362	11752.62881	542.42077	-1.19225	0.00848	727.05616	0.11343
128	4978.87403	17.57607	8083.95214	552.47378	1.34577	0.02116	736.88042	0.33622
129	5112.47169	10.95305	14086.29029	182.78688	0.30032	0.00252	262.89672	0.16321
130	3995.18244	22.89715	7947.72512	766.70409	2.44570	0.03448	792.30224	0.54111
131	3794.44231	12.81681	11615.95269	112.94946	-2.32666	0.00462	87.43046	0.81503
132	4463.86254	19.61265	5661.92597	409.10866	3.10239	0.03146	456.57496	0.41210
133	3756.37383	12.39122	6492.29788	331.16821	-2.15302	0.01569	360.18031	0.36229
134	4381.04982	18.86463	8605.48435	681.79719	2.27656	0.03982	741.49459	0.42359
135	4240.57810	24.69904	8294.98264	723.30397	1.40818	0.01805	834.32765	0.39200
136	4617.60411	21.71802	15575.60949	308.61912	4.07213	0.06086	313.12550	0.53484

137	4667.13766	16.61649	17964.59653	358.88542	4.97428	0.07483	506.54803	0.47994
138	4240.32048	24.67215	8283.98162	757.41690	1.18651	0.01873	794.56160	0.37663
139	4814.96654	20.81131	7744.10406	661.42530	2.15706	0.04963	826.92273	0.41292
140	4552.04829	17.90666	8131.11377	430.42360	3.80627	0.03191	558.41985	0.23573
141	2982.89147	20.65483	8600.98879	567.49552	4.65346	0.21468	440.93108	1.23964
142	4804.18162	16.92211	9955.20134	623.40528	0.15040	0.03111	826.52458	0.35157
143	3673.66865	14.11040	10021.65902	533.58206	1.55209	0.06460	547.77901	0.65689
144	3764.29920	25.42051	6887.17347	72.34720	4.31633	0.00658	27.91497	1.31097
145	3266.85874	18.43173	18562.06839	467.70453	2.55254	0.19434	398.12762	1.07443
146	3832.37008	15.78421	8631.17028	677.41842	1.99908	0.03533	693.64731	0.53440
147	4516.72050	20.88650	11717.37367	544.82140	4.43514	0.01562	625.68069	0.23706
148	4196.35230	23.83504	8455.87797	779.60676	2.24629	0.05246	849.57334	0.55302
149	4725.22864	19.36216	9896.12949	653.16867	0.61344	0.03686	856.01950	0.29387
150	4791.66386	15.76209	7302.29017	427.21877	3.76168	0.01529	628.27059	0.21962
151	5025.35680	18.29030	10072.49290	472.59936	1.78154	0.01759	679.05728	0.25015
152	3736.28613	11.53759	8785.01006	544.71611	0.77320	0.03192	518.09436	0.60522
153	2532.25828	26.33955	11126.41662	462.83142	8.42406	0.18398	182.75097	1.45423
154	3345.95697	24.29642	11666.58607	486.38905	3.68000	0.06225	401.42888	0.48806
155	3502.94134	9.31943	7972.22985	386.23728	1.02220	0.03721	314.80698	0.48271
156	4821.26202	20.94416	7796.49915	536.88044	3.73928	0.04235	660.67577	0.41278
157	2449.07160	13.75136	3921.97176	434.08834	5.87202	0.26880	498.64671	0.68063
158	3867.95488	24.39019	6309.52359	1181.41757	5.39337	0.01717	1116.89507	0.69567
159	4053.09618	9.44486	11831.52650	173.80304	-2.11065	0.00322	190.28425	0.20756
160	4979.57821	6.98153	8900.22734	312.48717	-4.80894	0.00023	454.05518	0.03384
161	3476.66284	13.92420	7317.65599	585.80610	1.58468	0.06247	553.32938	0.57297
162	2960.20789	25.01464	7141.09490	662.08150	6.25526	0.17302	422.69375	0.76466
163	4547.81466	20.96497	12097.41985	717.23333	3.41307	0.01157	862.68004	0.24475
164	4847.28130	13.30690	11072.01747	334.91474	2.18854	0.02177	499.44122	0.29326
165	4708.32189	15.77014	11398.16162	410.54735	5.37075	0.05592	534.83393	0.39873
166	4574.93001	7.67807	8854.45205	349.06730	-2.73683	0.00387	493.41280	0.08366
167	4573.59215	7.63590	8693.97038	330.55281	-2.25191	0.00368	445.43650	0.07962
168	3378.70002	9.60394	6911.53439	451.73509	2.78460	0.06861	423.91419	0.53486
169	4671.09153	20.17963	9987.77247	371.15154	4.29100	0.04419	515.95185	0.30026
170	4708.54533	15.77251	11411.14858	349.29532	4.57007	0.04919	444.40426	0.38407
171	3753.82317	12.28252	6499.65555	318.64686	-2.06506	0.01464	325.04692	0.39283
172	4387.06451	22.62190	8486.24556	615.92513	5.33241	0.01934	821.84858	0.27517
173	4490.18658	21.04576	9247.10802	521.96437	3.20052	0.04386	651.73693	0.38525
174	4768.50570	21.59497	19747.07382	620.10056	3.81446	0.03654	789.65428	0.26698
175	4737.94619	15.91636	12172.28438	487.97514	4.17478	0.04923	677.92715	0.42751
176	3503.35052	15.34403	11521.22014	447.75834	2.43773	0.10623	352.13025	0.51465
177	4701.17262	15.45190	14257.15175	383.87541	5.62106	0.06826	532.56259	0.27042
178	3170.13302	15.82881	12127.17283	457.23852	4.15675	0.11752	401.90999	0.58716
179	3226.66343	14.56332	10167.05622	403.69408	3.66876	0.09528	383.55361	0.47075
180	4352.56166	23.78980	10466.78242	959.82552	3.99398	0.03844	975.56848	0.54968
181	4968.91225	6.94982	14222.50458	115.93802	-1.20987	0.00148	136.92244	0.15263
182	3189.71623	16.71477	7020.63114	301.43581	2.19602	0.09506	207.50612	0.63399
183	3703.55731	7.84260	6096.06863	389.62503	-1.10061	0.02369	398.35492	0.42521
184	4287.37018	17.67127	14002.65154	72.94627	0.85587	0.00878	33.03246	1.21163
185	4691.04951	13.51584	9652.49162	406.58707	2.94345	0.02074	493.69776	0.24237
186	3742.23132	11.74546	7568.91739	733.43021	2.12284	0.02281	736.79821	0.55804
187	3492.89786	18.90423	18659.68151	391.21535	0.44561	0.04932	323.74020	1.76519
188	3502.82214	9.32358	7982.69894	520.01817	0.20362	0.03526	495.19288	0.48292
189	4429.47211	14.88172	23140.67522	75.23077	-3.31182	0.00038	42.60017	0.85910
190	4707.94218	11.18363	15933.57610	152.69311	1.77777	0.00779	195.47152	0.23151
191	3703.30225	7.83572	6092.49250	353.31365	-1.97298	0.02128	350.71257	0.50491
192	4958.32245	6.65705	9988.94468	236.67999	-2.30498	0.00802	317.36384	0.18474
193	4463.34075	20.99679	9403.80432	530.25337	1.24193	0.04429	687.65659	0.37318
194	3908.39022	13.82716	17523.28043	163.25856	-1.52579	0.00451	170.61056	0.59412
195	3502.37077	15.32759	11554.50014	335.63745	1.57632	0.09210	237.17919	0.41812
196	4640.86389	20.12099	9533.08013	298.75478	3.54518	0.04515	398.23698	0.33602
197	3504.82636	9.33625	8003.22629	453.97281	0.43720	0.03467	406.14726	0.47908
198	4958.15148	6.63957	10869.47904	348.74224	-3.42133	0.00612	493.26123	0.17387
199	3136.10587	19.85520	10527.54256	538.17622	3.46537	0.13396	383.54566	1.27904
200	4968.15078	9.87375	8845.21018	430.72774	0.53190	0.00757	611.27238	0.17155
201	4572.98627	10.32484	9286.41376	532.55232	-0.35669	0.03536	668.07151	0.28811
202	2487.60714	15.39260	3154.36119	431.10404	5.56260	0.33642	520.22021	1.03991
203	4035.48452	9.21926	11379.37662	272.73342	-1.03364	0.00921	378.09697	0.08604
204	4233.10717	18.87847	6827.61577	664.32927	3.41611	0.04556	690.78304	0.54422
205	2909.69881	16.54395	14893.46183	312.48079	4.71728	0.20491	258.92656	0.74732
206	4281.50231	14.23818	6822.81328	457.62733	-0.94647	0.02469	481.12094	0.43148
207	3181.74356	24.97409	7741.59488	447.11284	4.34271	0.11985	218.75252	1.25357

208	3740.30666	11.70592	7551.90585	760.26839	2.43670	0.02649	699.86153	0.51979
209	4527.95195	20.08971	24792.23080	504.14448	5.14178	0.11562	649.98183	0.31929
210	3379.08124	9.61675	6931.97957	450.79740	1.90387	0.05871	483.57156	0.54226
211	3490.89511	18.88220	18675.31819	471.35538	0.09522	0.04923	435.41941	1.74564
212	4410.19898	17.86098	7009.55978	709.53333	2.33010	0.04128	746.03163	0.41825
213	3553.45425	17.53951	7375.46699	500.33318	1.75798	0.11921	491.12207	0.80801
214	5009.03575	10.08917	9282.25818	286.06727	1.51527	0.00548	428.24308	0.12055
215	4808.87397	22.35969	10472.50082	759.21505	2.17095	0.01572	992.25552	0.24844
216	3775.41784	12.08735	9413.48271	578.32488	0.24261	0.02987	576.18466	0.49549
217	4195.93799	23.77238	8446.92886	811.78749	2.56844	0.05051	875.30201	0.58484
218	4542.99895	15.96125	11294.49959	414.48244	5.12302	0.07440	589.50222	0.35224
219	4928.29696	7.63807	8966.28419	324.58779	-0.79668	0.00064	486.86858	0.03108
220	3149.92737	24.96231	7946.31569	635.07164	4.27972	0.11120	433.15072	1.18608
221	4533.43262	10.83530	17125.37730	81.01828	-2.65801	0.00006	70.18648	1.19805
222	4885.69758	9.31778	12568.65181	377.61770	0.73791	0.01664	556.52687	0.27509
223	4575.07982	7.68226	8867.17683	310.55396	-1.63064	0.00373	444.37818	0.08417
224	4249.21249	16.23203	14342.83555	87.16786	1.11228	0.01234	60.37254	1.55771
225	5018.85976	13.77210	8454.58275	451.78582	1.16619	0.01574	666.47636	0.18597
226	4003.66069	9.94146	9360.68297	351.85871	-1.01428	0.01247	426.39121	0.18544
227	3175.29142	15.84610	12197.92946	441.05114	3.99633	0.11979	392.48318	0.64648
228	3693.87181	25.05438	7512.52621	57.25005	3.03484	0.00572	14.84061	2.06581
229	4944.98443	13.13936	9378.82187	338.16787	2.67447	0.00998	514.19558	0.20652
230	3132.06833	15.55078	6691.74840	304.25732	1.96432	0.01462	253.69371	0.19015
231	4630.36885	22.27181	9841.78831	519.96740	2.04485	0.03750	659.39319	0.39696
232	4634.09194	22.31023	9548.59147	647.66255	3.69082	0.04230	805.32647	0.41100
233	4846.61226	12.74733	13285.93591	411.51200	3.31556	0.02558	580.65678	0.22340
234	4675.00284	18.89011	12412.23491	491.05246	5.46849	0.03986	615.31309	0.37913
235	4779.76261	10.41440	11705.83869	419.14191	0.24273	0.01282	558.92133	0.18268
236	3540.09318	17.38805	7984.32142	408.72916	0.00472	0.06067	426.43057	0.51959
237	4918.81224	10.83208	8784.41098	146.98778	2.83908	0.00669	187.15566	0.08946
238	3103.75808	17.38579	16823.58851	395.59532	3.42546	0.19889	289.54461	0.97235
239	4515.40451	20.93353	15075.61704	713.20587	3.55980	0.01342	874.16031	0.23014
240	3395.41697	11.74046	7595.56777	503.98480	1.97641	0.08524	416.75956	0.57559
241	4376.66924	18.81484	8567.30691	659.78708	3.08984	0.04522	700.49545	0.39048
242	4423.14382	11.47509	8385.02738	652.41054	0.17831	0.01451	772.41610	0.16639
243	4748.46402	14.79539	9625.48323	492.36247	3.66171	0.06202	683.95015	0.59735
244	4875.79602	7.73431	9578.01881	404.89343	4.91773	0.01252	567.45067	0.20623
245	4187.81355	23.78789	8398.05155	749.17871	2.66968	0.05410	801.10799	0.51133
246	4967.50695	9.96800	8793.03502	220.50095	1.44958	0.00417	316.24183	0.18404
247	4548.69336	16.03233	11285.34523	425.66251	4.92851	0.07571	609.64988	0.38314
248	3577.07105	13.33194	5206.25214	581.80657	1.84036	0.03970	566.34761	0.54894
249	4550.17745	16.04678	11304.72335	474.59495	4.25896	0.07468	670.01000	0.38357
250	4537.25161	20.26768	20354.01129	527.85734	4.14750	0.11124	696.64477	0.44580
251	4496.70697	12.62445	9335.33935	504.25451	-0.61650	0.02372	571.08750	0.29368
252	4429.36085	20.16194	8117.68321	387.67157	5.85079	0.12646	387.02169	0.50765
253	4228.42487	18.84933	6815.12958	729.68847	2.87375	0.05406	766.41455	0.55725
254	4737.72624	15.91663	12182.27726	355.95779	3.53642	0.04645	488.41787	0.43137
255	3832.87375	23.93518	7090.42428	522.52954	6.46389	0.07512	516.90150	0.44248
256	4727.72691	21.60185	10074.23935	536.19388	3.59652	0.07078	698.83795	0.45824
257	4138.09626	12.94261	12637.84518	241.27434	-0.82842	0.00624	313.34819	0.13799
258	3127.09448	16.67539	9401.53122	558.81860	4.04892	0.23283	483.14482	0.64012
259	4399.37422	6.56532	7957.27086	346.74130	-1.83246	0.00315	447.96465	0.06603
260	4883.58244	19.79891	11111.37714	437.53453	3.27640	0.06628	606.18785	0.36667
261	5044.83270	13.48098	8945.33568	319.42239	1.55831	0.01328	469.51377	0.20875
262	4571.31379	22.49068	12893.76084	484.03683	4.62714	0.03387	601.34219	0.35272
263	4640.26286	22.36167	9572.07138	646.48759	2.68329	0.04153	824.45512	0.43667
264	4688.99635	18.27464	16677.87371	447.32976	4.41519	0.02841	603.47475	0.18254
265	4772.32316	18.47812	10688.48512	564.06076	1.30371	0.03367	733.48550	0.36833
266	2492.89583	14.46356	3664.67363	532.34708	5.62266	0.32727	523.58608	0.26154
267	3238.21670	19.74970	13380.57846	403.09927	1.87758	0.17583	327.51464	0.90660
268	2897.17458	15.76703	15537.03274	338.24796	4.51034	0.22979	258.74833	0.83727
269	4327.44694	15.91910	9201.49670	222.54191	5.99525	0.11512	251.82416	0.46036
270	4341.52180	18.33702	6913.47850	538.89422	4.69145	0.03766	554.19024	0.45479
271	3429.19189	8.09029	13631.65909	355.06390	2.03001	0.02905	340.98334	0.42731
272	3504.59824	15.32811	11528.23023	484.40832	1.43391	0.08883	419.34871	0.51326
273	3515.73339	9.35084	8273.06386	435.19177	-0.85062	0.02923	374.87939	0.45596
274	4345.02105	23.77899	10428.35275	854.25317	3.20117	0.02870	870.51110	0.55943
275	4774.11143	10.19365	11718.88558	539.52989	-2.21294	0.00743	725.88801	0.19366
276	3901.88482	24.71768	10039.05331	1142.26080	6.67507	0.01435	1093.23059	0.33809
277	4082.35785	20.31514	14865.58707	84.92627	2.56699	0.01086	52.02191	0.54566
278	3118.97478	15.95149	6831.29904	300.64906	0.23156	0.01150	252.52515	0.29874

279	3570.71021	17.60237	7370.31829	389.75290	-0.41136	0.09600	361.33210	0.82977
280	4628.87340	22.28046	9853.62727	638.42660	2.34019	0.03816	805.09771	0.41131
281	3869.46630	19.92713	13182.46021	118.21906	3.36480	0.01685	98.72835	1.27634
282	4279.86146	14.16975	6856.20496	653.21829	1.08883	0.03316	752.59229	0.37234
283	2482.06454	14.30061	3649.64978	537.99949	5.50889	0.34385	609.35707	0.90150
284	4575.13612	10.34812	9302.22380	463.55308	-1.01462	0.02600	605.69301	0.17016
285	3160.53003	15.78880	11984.54839	399.19717	3.63415	0.11434	343.61857	0.63929
286	4558.75560	20.52791	17117.26120	459.14941	6.72497	0.09808	581.54542	0.39878
287	4425.99291	17.38379	10699.26260	628.79862	2.91251	0.02956	678.69139	0.40963
288	4797.89260	16.83108	9905.61549	645.70129	0.67881	0.03642	823.96608	0.40879
289	4432.04974	14.64606	6180.61143	699.09743	3.27156	0.02865	759.74445	0.29506
290	4729.32560	19.36586	9906.80223	642.53453	0.61221	0.03488	834.38467	0.26076
291	3969.82112	13.89657	17013.21089	135.68934	-1.02610	0.00272	140.20863	0.52751
292	3430.89497	8.09469	13600.27382	353.93087	1.32783	0.03289	358.60741	0.45106
293	3773.35620	12.03531	9410.68056	677.62631	1.19561	0.03257	673.51587	0.54740
294	3133.66231	14.09739	8590.75187	587.17719	4.29169	0.31705	519.82929	0.81371
295	4919.81752	19.94647	11484.46693	580.45223	3.14268	0.05720	783.19217	0.40576
296	3381.31046	9.65060	6948.21394	472.95430	2.22466	0.05626	493.38193	0.56294
297	4242.62264	19.12197	7242.24130	569.55638	3.43509	0.04962	616.56614	0.50229
298	4814.07524	22.38198	11639.95116	737.41116	2.40232	0.01580	980.69834	0.24908
299	4617.28994	21.71499	15584.82789	447.83877	4.88254	0.06004	522.34627	0.53704
300	4147.24176	16.40930	8932.34031	742.60570	1.36029	0.02632	819.35410	0.46112
301	3223.27654	14.53751	10121.77639	499.64489	3.30063	0.09596	517.28270	0.46228
302	3736.14899	11.50917	8793.49295	478.69866	-0.23346	0.03213	449.81312	0.61362
303	5112.55294	10.95840	14650.41211	169.32257	0.24251	0.00262	238.47693	0.11946
304	4719.09221	19.28536	9892.75271	625.20124	1.12983	0.04065	797.64484	0.28774
305	4692.05209	15.37797	14167.34628	312.88823	4.16071	0.06516	438.13265	0.34688
306	4574.17633	10.45067	9309.03816	386.54922	-2.81537	0.02025	490.36166	0.21721
307	2542.57415	14.95855	3457.58319	428.15874	4.84039	0.25101	443.41733	2.06935
308	3786.04572	19.91702	9519.80428	467.66467	-1.01789	0.03358	437.71491	1.33321
309	3371.50036	7.48854	13564.11412	329.45176	0.63919	0.03173	283.18216	0.49899
310	4769.03486	18.42271	10673.79157	647.16731	0.84226	0.03420	844.08063	0.37725
311	3387.64806	9.53670	6802.74332	395.60273	0.91556	0.04837	354.99468	0.60890
312	4664.77591	19.54769	12889.36032	361.66201	4.59122	0.09130	472.38447	0.46409
313	4417.17134	17.82563	7200.19094	550.56366	1.21542	0.03148	650.23138	0.32533
314	4752.62973	14.63297	9512.52105	259.87565	3.39459	0.02701	361.14693	0.34151
315	4263.00275	23.20440	13439.31127	782.17856	4.79704	0.00964	952.09778	0.12498
316	4281.55474	14.25040	6814.77214	456.00275	-1.75393	0.02126	510.77610	0.44219
317	3128.54875	15.58337	6663.64280	343.66949	2.08462	0.01584	291.82123	0.25125
318	4691.14398	13.75373	9725.83307	382.37405	2.64573	0.02070	460.32896	0.23961
319	4252.54101	18.99922	7165.25977	765.01830	3.81865	0.05575	798.58541	0.39853
320	3741.91493	11.74745	7152.50950	731.14448	1.92335	0.02780	711.24826	0.51623
321	3310.21481	14.66043	11501.79255	395.99298	1.57850	0.05899	387.59800	0.57056
322	4844.79224	12.70214	13234.16047	411.13753	3.45460	0.02565	586.73071	0.22992
323	4002.24938	9.94623	9323.84743	347.74871	-1.27215	0.01285	435.87552	0.22116
324	4755.56328	21.56924	20037.85915	492.93615	5.51172	0.03203	640.87249	0.35156
325	3853.44431	24.43696	6290.12613	773.98505	3.35971	0.01772	755.65370	0.84718
326	3576.20513	17.69609	7355.83874	437.02581	-0.08891	0.09391	424.53552	0.82217
327	4831.57827	14.36500	11015.12594	348.59267	2.81960	0.02946	523.25157	0.21008
328	4879.83300	10.51177	7525.32684	52.98610	3.75058	0.00422	8.38412	0.61703
329	4765.66358	18.36513	10677.68933	711.41957	2.15705	0.04051	895.28780	0.32719
330	3395.84027	11.75449	7578.51893	583.88015	1.78461	0.08648	487.41976	0.68657
331	4683.93386	13.66964	9857.49805	428.58826	4.12600	0.02018	525.60855	0.23285
332	4899.51453	13.48042	8156.34554	386.21615	1.87921	0.01604	559.88382	0.23240
333	4505.92174	16.71458	8834.79379	492.74064	0.32375	0.03019	594.17577	0.34697
334	5024.69998	18.12417	10144.83044	294.76977	1.13673	0.01570	412.23892	0.25525
335	3582.04064	13.18356	5369.57414	559.69768	0.51198	0.04229	526.53170	0.57054
336	3665.12135	24.52284	13251.52514	85.92085	3.39344	0.00998	33.53836	1.16136
337	3146.50499	19.36744	8357.78324	485.21774	2.50257	0.15034	346.58430	1.89908
338	4420.71028	22.67493	8635.72221	530.92449	3.90762	0.01472	715.39727	0.28179
339	3173.19592	16.42293	9623.33404	466.65291	3.47317	0.24584	354.26727	0.71684
340	3136.23373	15.59267	6714.27840	337.89567	1.24449	0.01545	320.01860	0.18222
341	4520.33736	25.72263	8496.72712	43.37954	1.29102	0.00107	8.45790	1.36583
342	2598.79240	26.31838	11487.42250	571.74392	8.02768	0.18350	306.51444	1.43235
343	5115.72267	10.81383	14006.43015	80.63308	2.44958	0.00302	67.04134	0.12454
344	3331.88364	24.24946	11514.68061	675.77603	4.84046	0.06754	620.73835	0.75136
345	4233.15620	24.71748	8281.42876	552.16910	1.32236	0.01979	604.14846	0.36911
346	3906.44382	24.66762	10038.62900	1295.16277	7.41511	0.01436	1267.77069	0.35725
347	4550.59457	14.08001	21617.26222	78.47459	-3.15846	0.00013	48.10326	0.62634
348	4845.34489	15.29070	9696.12338	375.98218	2.38327	0.02421	544.84271	0.29636
349	4484.90815	22.94557	7119.46352	477.45872	7.76191	0.15689	548.53617	0.66743

350	4892.58667	9.50308	12753.87621	385.29696	3.62148	0.02186	575.39920	0.20888
351	3841.97358	20.23320	6333.66974	726.62464	1.91397	0.02365	670.72775	0.44724
352	4857.47199	13.78365	11582.98107	481.46865	5.80929	0.04571	627.88074	0.51655
353	4779.62171	10.39019	11649.99459	477.62455	-0.54887	0.00902	623.12894	0.14012
354	4428.64289	15.57568	6468.80917	623.07719	2.32583	0.02383	688.34390	0.41850
355	4798.66576	16.83485	9913.75033	495.25181	1.17971	0.03379	632.35733	0.43973
356	3237.88800	25.05604	7580.09048	377.70179	4.14728	0.12190	172.94051	1.32666
357	2536.77428	16.45019	3438.65634	455.38161	5.08833	0.26745	511.25416	1.96662
358	4492.25051	20.51199	16032.78966	769.98883	2.85384	0.01287	920.05140	0.42369
359	3384.63891	24.44123	11976.01803	599.34133	2.31230	0.05757	514.01124	0.64968
360	3578.57550	23.20114	9378.79766	902.43108	8.89225	0.07344	668.56824	1.15901
361	4513.75064	19.85938	7327.50912	565.88824	1.70646	0.05170	710.83246	0.44722
362	4254.06467	18.97673	7159.44100	702.74424	2.28009	0.04210	771.66980	0.42945
363	4737.72092	15.91534	12184.83012	281.36834	3.38894	0.04566	368.00134	0.42918
364	3535.36084	15.22461	11904.76032	345.39835	0.81114	0.06952	257.54124	0.64651
365	3942.52210	20.04879	9132.46570	746.44040	5.56083	0.05297	656.61002	0.67688
366	4421.91098	22.69201	8540.57335	621.63057	3.53676	0.01338	818.19502	0.27994
367	2550.82192	14.84930	3719.46662	536.05568	5.25201	0.29746	596.02820	1.87622
368	2906.83174	16.53765	14871.15778	362.69991	4.02977	0.19381	334.17444	0.72689
369	3851.47658	24.43386	6301.43476	913.36653	4.02837	0.01740	898.67092	0.87400
370	4425.96939	11.53615	8416.13098	419.10757	-1.86401	0.01087	509.29019	0.26211
371	4752.95897	8.28125	9986.07382	282.53619	-4.29373	0.00300	386.38384	0.10919
372	4895.21815	12.79445	7484.41350	270.80795	4.00158	0.03941	345.44426	0.30065
373	3776.77981	9.57098	8271.00363	507.69817	-1.40912	0.04569	500.30531	0.66643
374	4244.11384	24.67768	8301.80885	644.21526	1.85901	0.01834	713.75421	0.39839
375	3540.45884	9.42444	7451.16819	695.93828	2.23684	0.04013	625.82527	0.66347
376	4469.63889	20.40823	13668.18166	458.07442	5.23618	0.10342	540.09865	0.48569
377	5002.94748	7.78097	14812.44330	220.62095	-1.93056	0.00181	332.91648	0.07772
378	4234.54346	24.71553	8288.96868	746.55387	1.27306	0.01784	845.15156	0.36851
379	4922.05181	10.94273	8944.54997	179.96587	0.94622	0.00538	245.87866	0.13352
380	4844.23983	12.61929	14451.82058	429.39065	2.52086	0.02263	619.46614	0.23201
381	4887.96516	9.39824	12709.07112	369.54729	1.83888	0.01937	556.03092	0.27138
382	4267.25519	16.20043	7789.75015	634.10329	1.14031	0.04430	691.11401	0.47085
383	3681.59501	7.67696	5920.79468	317.06682	-1.01133	0.02769	307.41948	0.47241
384	4641.21970	7.71927	18136.56599	116.57437	-4.39618	0.00006	138.61062	0.22933
385	3492.35033	18.88865	18667.01500	306.17785	0.27685	0.05001	197.33910	1.76673
386	4176.66197	18.97327	8246.87166	756.45188	2.22031	0.03449	789.12896	0.54171
387	4958.18112	6.64861	9992.88381	392.13873	-1.47400	0.00693	567.94659	0.19087
388	4807.82129	22.30833	10467.64409	546.49897	3.63297	0.01624	717.07409	0.26597
389	4250.26298	11.31821	11069.49332	106.58975	-2.27347	0.00043	110.55784	0.63159
390	4080.96441	21.81624	8936.49767	748.03163	2.38155	0.03000	796.29262	0.55178
391	4661.20694	16.54116	17819.40296	369.29008	4.36214	0.09132	502.29954	0.43295
392	4433.34341	15.59133	6459.48058	645.03867	2.97374	0.02176	718.65882	0.42875
393	4899.05126	16.86744	8800.57605	539.67914	3.41019	0.05274	709.29232	0.42506
394	3635.48670	12.67514	22231.79512	224.56684	-0.03282	0.02324	220.60603	0.46117
395	4794.51643	10.38113	11107.99709	375.81259	1.16714	0.03693	457.77883	0.42496
396	4291.57080	18.09389	6914.12094	755.52441	2.76333	0.06027	801.74920	0.30807
397	2907.51162	16.22126	14863.91137	522.71118	4.48263	0.20340	467.84730	0.59815
398	4415.61084	17.86828	7176.04179	516.75911	1.64014	0.04974	592.91570	0.44720
399	4657.83614	19.52847	11871.22484	401.24333	4.54860	0.09861	532.14892	0.49379
400	4239.04859	19.24865	7230.85252	493.51321	3.60754	0.04709	519.04933	0.44303
401	4504.70297	16.55542	8921.86372	416.33146	-1.72465	0.02938	474.28943	0.30488
402	3269.43185	18.13287	9873.01235	365.63118	1.85901	0.12594	273.00122	0.87258
403	4623.08628	7.71310	16720.23416	137.15779	-3.28989	0.00002	184.53061	0.08017
404	4641.30620	20.76060	9182.06483	632.68087	2.84475	0.07707	785.14163	0.51580
405	5019.49314	13.75811	8483.95541	401.19882	1.50179	0.01586	591.68241	0.17333
406	3577.58541	23.22148	9378.80866	1011.98388	8.66894	0.07733	744.29716	1.15139
407	5002.83590	7.77780	14811.40720	161.60996	-1.23083	0.00169	224.61784	0.07574
408	4792.75717	10.33267	11065.39938	625.02075	1.40512	0.03860	786.92746	0.42839
409	4556.22097	22.52837	12901.39344	523.12325	5.59165	0.02475	647.71671	0.40316
410	3773.23055	12.56513	13616.18101	157.50323	-0.77570	0.00385	170.58758	0.28429
411	3705.13602	24.55433	6227.98285	505.96281	2.70418	0.03496	431.57662	0.49434
412	4890.42149	12.72083	7283.29680	308.63227	3.21963	0.03992	399.58857	0.27945
413	2892.13258	16.22764	14701.05506	286.49815	4.97724	0.20168	147.08911	0.63304
414	4969.69892	17.26308	8779.96757	718.03434	1.20635	0.01744	923.88646	0.28102
415	4486.38747	21.02182	9237.80527	403.41168	3.65004	0.04492	511.39276	0.38906
416	3522.13455	17.30439	7880.04186	411.35108	0.74058	0.06751	383.85740	0.68658
417	4145.36808	16.45311	8928.20979	651.76832	0.74875	0.02165	708.39087	0.37819
418	4374.25124	20.36647	9901.57848	403.46610	1.36555	0.03895	420.25521	0.43733
419	4514.42725	19.81307	7367.51093	398.81671	0.73009	0.04782	462.69822	0.46069
420	2792.55866	14.54120	13694.51412	376.92479	4.86044	0.25043	266.23245	0.64436

421	4631.37105	15.34391	8233.66308	450.07182	4.51305	0.10419	622.43386	0.46818
422	3601.76193	13.10851	24842.97145	344.03986	1.35284	0.01645	435.09721	0.29491
423	3849.29728	24.38366	6298.88921	791.14241	3.83157	0.01894	755.60381	0.77786
424	4821.01541	20.94727	7793.26560	551.25337	4.08903	0.04476	678.57403	0.40775
425	4518.13417	22.70635	7796.55451	461.85735	4.92777	0.13022	521.23464	0.74932
426	4432.29137	20.23482	8166.79328	599.07818	5.56330	0.11861	685.10701	0.53844
427	4199.72635	21.01086	10523.16466	826.79291	2.95457	0.04075	809.44314	0.52170
428	4923.56108	10.94374	8924.36217	122.50315	1.54302	0.00427	140.47826	0.15073
429	4617.91194	18.63943	8318.09743	435.96887	4.02236	0.03250	557.95294	0.36170
430	4982.40490	17.70515	8847.92070	633.33435	1.36352	0.02159	823.55575	0.32086
431	4397.13221	15.25984	24821.82625	100.62614	-1.72569	0.00045	94.16131	0.31036
432	3337.93737	24.30370	11589.14921	645.01710	3.91641	0.06553	600.09883	0.48619
433	3679.24236	7.67087	5911.39651	385.33730	-0.33799	0.02805	412.58716	0.51798
434	2525.14223	26.21157	10856.23165	562.67719	8.83613	0.18777	283.72561	1.36932
435	4399.19303	6.56083	7934.34914	350.17231	-2.20728	0.00292	481.99840	0.09766
436	4767.79439	14.71219	12304.23832	369.77927	2.24441	0.02002	527.02989	0.37967
437	4461.28833	21.72709	8013.50940	545.52950	2.93858	0.02964	688.70899	0.30975
438	4515.89842	21.21178	10049.33502	476.58756	4.12186	0.08879	583.88738	0.55852
439	2911.80904	20.06285	7963.59057	537.46420	5.35488	0.27613	330.00601	1.01522
440	4379.58172	18.87491	8595.02343	488.36645	1.68237	0.03786	502.87081	0.37045
441	3164.30717	20.04962	10421.88456	507.08815	4.24045	0.14426	332.42818	1.10693
442	3962.70504	22.98020	7848.27134	880.00746	3.31174	0.04544	874.25721	0.53279
443	4844.66561	12.70146	15135.82209	363.11595	3.99612	0.02515	503.98482	0.31391
444	3394.40666	11.73251	7573.26630	529.92403	2.73616	0.09110	378.21986	0.77269
445	5077.02635	13.18337	12403.25943	93.38766	-1.35712	0.00112	99.29957	0.40612
446	4889.09172	19.86424	11143.07354	571.57527	2.40301	0.06529	795.66808	0.37970
447	4276.66036	25.02367	8460.51823	52.43086	3.17074	0.00142	16.44995	1.33347
448	3812.86174	13.94125	19698.70680	170.89256	0.07326	0.00547	178.06986	0.43949
449	3123.21186	15.52707	6648.65098	285.22499	2.79816	0.01589	202.64140	0.27378
450	3742.63581	11.76515	7592.42059	615.09378	2.44189	0.02145	568.34606	0.55968
451	4367.43774	18.79752	9615.13980	554.56318	2.12380	0.04126	632.14389	0.34448
452	4546.41582	20.95622	12102.62255	653.34871	3.52720	0.01141	775.57086	0.24238
453	4804.11615	22.29868	11499.13863	725.92005	2.28175	0.01363	923.53510	0.27527
454	4207.06372	19.12654	16489.38784	50.04043	2.50729	0.01199	10.75747	0.82641
455	4664.80640	16.57279	17941.30606	364.16912	4.05319	0.08521	493.65288	0.45925
456	4726.05909	19.36193	9907.81694	579.48020	1.31142	0.03737	751.36323	0.28526
457	2894.42428	16.56801	14344.91649	332.96641	3.80267	0.23031	211.06062	0.71275
458	4006.78720	9.88345	9289.54849	305.20831	-2.26075	0.00718	393.19319	0.20158
459	3832.38283	15.81186	8603.41109	686.92823	3.06648	0.03742	667.64664	0.54374
460	4571.75016	14.06804	21584.77753	57.93967	-3.54961	0.00001	26.77451	0.36882
461	4672.59238	16.68073	17913.98870	373.74418	4.02745	0.08511	505.54253	0.46589
462	3680.17269	7.67554	5916.92266	378.33308	-0.54235	0.02728	368.01611	0.51906
463	4675.97572	18.88816	12416.50157	362.73129	3.57614	0.04299	433.61560	0.39711
464	2480.12780	15.14041	2976.60360	450.49779	6.01949	0.22944	490.18110	1.46886
465	4521.05237	19.91818	7349.83686	483.05549	2.83327	0.05140	566.61558	0.44002
466	4872.31159	16.81129	8556.16537	514.67422	2.64685	0.05951	702.78643	0.40245
467	4381.31561	18.72507	8626.45046	414.97638	1.89567	0.03800	416.39739	0.37934
468	4896.04639	12.81831	7293.35718	383.11609	3.10594	0.04070	523.52824	0.23720
469	4608.42240	22.32111	8639.24404	560.24210	2.62158	0.06028	679.59849	0.36149
470	4685.21885	13.62288	9883.68198	428.57043	5.21463	0.02293	517.33047	0.20720
471	4502.89190	19.74142	7296.81599	582.38762	3.23414	0.06184	682.95412	0.43487
472	3576.09416	13.35690	5217.56851	599.37777	1.94663	0.03804	580.64268	0.68052
473	4610.50808	7.66491	17977.05385	56.57030	-4.12462	0.00011	28.39869	0.86968
474	4680.04757	21.50749	9120.09739	343.36489	2.60046	0.05218	385.05169	0.54333
475	4551.35331	17.76475	8423.95817	570.30575	2.08236	0.02740	746.18795	0.30547
476	4752.30862	14.65865	9512.20984	401.22322	4.98858	0.02739	583.92697	0.33007
477	2516.24947	26.29982	10974.07367	549.27727	7.88618	0.19143	285.37173	1.38476
478	4661.68136	19.56139	11899.13360	394.25417	4.54174	0.09379	520.18380	0.49620
479	3629.60421	23.26870	5162.98275	671.20697	7.68113	0.08631	659.30077	0.42476
480	3784.40822	19.93887	9541.48768	472.43636	-0.97593	0.03417	428.96619	1.22029
481	4941.19015	13.05164	9531.05436	398.49639	1.55366	0.00944	593.61121	0.18212
482	3545.85526	16.78658	17416.75356	406.14690	0.88347	0.14955	353.17934	0.74681
483	3550.99638	17.48772	7380.63922	538.25337	1.28811	0.12189	512.26301	0.82818
484	4707.10583	17.93789	16252.90274	490.92453	3.02288	0.02510	658.73704	0.20664
485	3222.17958	14.54586	10100.71856	399.51575	3.40913	0.09302	377.53885	0.46383
486	3136.11420	15.59457	6700.05624	280.15218	1.95043	0.01488	229.08787	0.18618
487	4741.38653	21.71779	10174.46160	465.49176	6.83464	0.07472	589.52342	0.42553
488	3396.93651	19.55157	17766.83505	358.97707	0.47555	0.12524	310.81307	0.75320
489	3673.05176	14.13497	10019.83655	484.82571	1.40912	0.06320	509.68110	0.65991
490	4772.35267	18.46557	10689.61871	712.31583	1.38429	0.03251	914.38685	0.36038
491	4575.32579	10.45312	9316.25225	456.06232	-1.15160	0.02245	598.03982	0.20142

492	4431.71597	15.51793	6378.31325	700.94822	2.72701	0.02856	763.24213	0.35856
493	3137.15154	16.79809	9539.48228	494.71749	2.55695	0.18157	421.11974	0.67188
494	4336.27608	19.37923	6365.09384	649.88714	1.87835	0.05773	693.46042	0.39729
495	4924.31682	7.62146	8954.02906	339.99221	-1.31376	0.00075	504.41820	0.03942
496	3261.75630	18.16035	9807.90375	407.78617	2.25024	0.12961	321.45181	0.83473
497	4787.34026	22.26668	10689.88285	342.14670	3.42270	0.04987	406.38097	0.51797
498	4967.14711	9.85893	8842.09060	378.79615	0.65697	0.00722	542.76278	0.16270
499	5024.23600	18.11675	10125.34111	406.07074	2.38367	0.01534	580.91170	0.24364
500	3179.62182	18.27718	10645.47429	309.18979	3.26502	0.17633	212.67461	0.75810
501	3754.12001	12.37978	6481.96603	402.26421	-1.10239	0.01719	432.42725	0.41725
502	4897.67459	12.83649	7291.09597	390.03958	3.03089	0.04042	521.03890	0.31837
503	4854.23015	13.71734	11897.33122	510.17231	2.48599	0.04407	647.46037	0.49433
504	3754.93639	12.24219	6501.99621	333.60342	-2.60955	0.01499	346.08614	0.38960
505	4796.27991	10.40294	11111.89816	581.73853	0.11494	0.02759	745.18119	0.39619
506	4774.09776	10.18781	11610.96850	453.11311	-2.34395	0.00749	609.98881	0.17087
507	4183.48349	23.79364	8380.52307	736.19724	2.38603	0.05700	784.05417	0.52875
508	3742.31322	11.76326	7582.03685	710.31230	2.05399	0.02478	706.15909	0.53293
509	4944.39048	13.13621	9369.29961	339.55619	2.17526	0.00967	510.06255	0.18523
510	4561.91327	14.17757	21035.44147	63.93166	-4.59722	0.00008	26.96852	1.05078
511	3755.03476	12.38448	6490.54700	436.68111	-0.26710	0.01755	471.70011	0.41745
512	4007.54231	9.37823	8973.43606	247.55166	-2.90231	0.00630	276.69905	0.22866
513	3102.17694	19.67482	10603.36703	621.97492	3.98198	0.12693	480.67601	1.25985
514	4325.12655	18.36412	6820.81037	640.64546	3.36416	0.03008	684.81679	0.49216
515	4970.02326	9.94090	8509.18475	382.02335	5.24069	0.00937	546.75042	0.16201
516	4659.43683	7.50302	18079.79185	116.36373	-3.79310	0.00004	139.86230	0.13105
517	4573.43636	10.37638	9296.03341	399.14048	0.02064	0.03319	490.89733	0.26820
518	3609.68005	17.48598	17129.36237	358.76074	0.10272	0.09883	297.54877	0.89937
519	4330.91442	15.94377	9234.97918	488.50614	5.52322	0.11691	663.10203	0.43888
520	4493.23303	20.51485	16039.15843	657.11762	1.83911	0.01302	797.31141	0.42371
521	4832.15150	14.37961	11014.90936	323.72021	3.72743	0.03145	484.00062	0.23742
522	4664.38000	24.35827	8648.11284	606.61199	5.29130	0.06015	719.53625	0.94742
523	4456.74325	20.40559	16317.20139	712.61064	4.00953	0.01687	883.99015	0.28396
524	5112.73943	10.96903	14649.53900	177.44309	-0.63499	0.00290	250.37569	0.09973
525	4698.80286	7.09446	15582.59258	114.50897	-4.76901	0.00002	137.58380	0.23482
526	4679.28087	21.50303	9108.05068	566.03863	4.25971	0.05850	694.58351	0.54459
527	5044.91267	13.48722	8943.29080	343.88810	0.09993	0.01374	507.75767	0.19955
528	2966.09517	24.86220	6511.66728	431.64381	6.03917	0.16718	205.45434	1.08486
529	4146.89039	16.37049	8962.78224	631.82275	-0.88377	0.01825	696.03792	0.46090
530	4467.53382	20.39084	10332.69488	805.27465	4.48180	0.01955	965.45194	0.30243
531	4682.24324	18.36398	16759.39013	418.06339	3.98712	0.02985	567.27538	0.17375
532	4759.45806	18.19842	10685.36681	521.62439	-0.14906	0.03319	689.06204	0.36580
533	3766.45262	11.91345	9258.14565	770.47672	2.27514	0.03340	763.83288	0.63037
534	4888.44491	9.39206	12701.48789	360.42559	2.84618	0.01999	537.11577	0.27072
535	4740.71606	21.79955	10200.35932	420.65611	4.28973	0.06196	516.87542	0.46571
536	4006.46738	9.38928	8892.13205	334.22460	-2.92367	0.00608	410.17669	0.22523
537	4565.85663	20.64413	17676.48409	463.32114	5.93486	0.08876	579.21288	0.41501
538	4607.32862	22.30232	8626.44809	612.94418	1.71305	0.05093	777.35706	0.35370
539	3680.67762	7.66710	5911.17319	438.59391	-0.04134	0.02608	460.58303	0.54106
540	3913.43626	12.96443	12063.43261	372.50293	0.21639	0.03466	419.31178	0.44656
541	4941.61112	13.06062	9536.06589	283.66519	1.77886	0.00912	417.50368	0.18321
542	4080.93866	21.81695	8931.39158	862.33537	2.38343	0.02925	832.60228	0.55127
543	3680.21307	7.67112	5906.97922	426.50937	0.25056	0.02592	422.46720	0.52359
544	4768.32226	21.59413	19682.15754	519.81611	3.49405	0.03689	665.11601	0.27151
545	4289.99626	18.07960	6904.19461	784.55754	1.67086	0.04827	838.10408	0.50533
546	3538.89551	16.75610	17414.31121	405.61155	0.87370	0.15038	360.55824	0.63727
547	4978.52090	17.57305	8080.63647	536.54685	1.87450	0.02070	704.50674	0.32266
548	3671.21445	14.04870	9981.28146	410.66252	0.79748	0.05980	422.07633	0.53929
549	4044.09327	9.18784	11374.91049	205.01022	-1.21218	0.00776	267.77172	0.12691
550	3225.77293	14.55425	10151.63554	448.72562	3.58145	0.09353	491.57153	0.43046
551	2541.57960	16.40819	3510.02896	433.74802	5.22775	0.27331	496.11678	1.92600
552	4635.17176	15.39219	10149.89583	385.00532	4.85445	0.07865	549.03569	0.44981
553	3853.16217	11.67353	12287.14912	102.49356	-1.76698	0.00304	71.05099	0.91202
554	3540.06191	17.35227	8061.38166	388.26849	-0.67919	0.04351	373.59914	0.59644
555	4244.45229	17.30971	7628.00708	644.50314	-1.62631	0.02161	726.12424	0.53807
556	3713.08643	24.21043	10658.04482	841.67623	4.45723	0.05703	736.52888	0.60714
557	2490.75711	14.53781	3610.80373	454.24723	5.82407	0.32174	439.33050	0.08853
558	3539.47652	9.40869	7352.67913	611.89565	1.95287	0.04351	571.68808	0.64474
559	3835.62641	23.86067	12162.75990	583.34463	6.44008	0.01955	670.32540	0.06844
560	4575.75379	7.68209	8857.41756	254.37564	-3.61549	0.00356	343.92664	0.09969
561	3842.11405	20.20501	6347.59570	620.23564	2.55243	0.02500	584.30355	0.52192
562	4334.83956	17.15219	8147.63171	524.07706	3.32486	0.05087	540.01743	0.33159

563	4609.05310	18.89021	7973.26920	485.42371	4.89658	0.03871	623.04532	0.25147
564	3832.89738	15.79098	8615.42931	847.85561	3.13027	0.03814	844.72249	0.65248
565	4281.25253	14.22183	6827.17577	586.38583	-1.38905	0.02545	675.58375	0.35459
566	4318.02301	18.28343	7691.45040	443.42387	5.70723	0.11001	526.33864	0.43166
567	4751.63130	21.59592	19374.45228	547.59179	4.71643	0.03776	697.77599	0.27742
568	4146.94400	16.37782	9014.33212	692.36421	-0.17061	0.01755	762.10163	0.43484
569	4318.74431	18.29668	7713.45948	513.23324	5.90596	0.11033	606.35530	0.44015
570	3238.50901	18.20671	18007.39584	392.29895	3.05854	0.19847	296.24554	1.15266
571	2446.40590	13.58077	3710.74841	320.88382	6.72082	0.23693	280.34434	0.35400
572	4291.01394	18.11856	6911.24893	691.07514	2.00687	0.05676	757.38423	0.45366
573	4573.13730	7.60286	8607.66732	363.38759	-0.90234	0.00516	509.27559	0.12946
574	4462.28170	21.72982	8020.45304	389.73099	2.95531	0.03023	501.37416	0.34457
575	4418.77685	17.91020	7188.73980	616.89080	1.22659	0.03889	750.12070	0.36497
576	4890.64113	12.71762	7284.54435	425.87926	2.28986	0.03804	588.88838	0.30092
577	3373.54909	20.31643	10644.71408	231.83646	4.83080	0.01917	278.34616	0.94308
578	4885.66765	9.31697	12566.44123	339.00199	1.78069	0.01557	495.84780	0.27108
579	3754.47960	12.38274	6486.70535	404.56889	0.28845	0.01772	445.52903	0.41696
580	4367.71054	18.88616	9566.21184	565.42070	2.37242	0.04459	649.98296	0.40189
581	3753.71943	12.35330	6482.78565	338.13107	-1.10086	0.01457	356.05475	0.41600
582	4267.25590	16.23233	7804.00860	603.37202	1.42683	0.03817	641.34727	0.50879
583	3334.30215	24.25923	11566.46322	509.23890	4.03779	0.06532	424.95039	0.65418
584	4875.82109	7.73292	9580.86018	437.80546	1.32361	0.01205	608.04380	0.20176
585	5003.01489	7.78008	14891.87899	177.89120	-0.44101	0.00194	255.79006	0.08630
586	4430.28244	15.50488	6374.73348	607.75485	3.63993	0.02910	645.65611	0.36378
587	3181.79652	16.49190	7091.16302	388.69687	2.96643	0.12055	298.04052	0.70290
588	4604.22430	20.65572	22451.66051	486.55031	4.73857	0.07807	631.86870	0.48650
589	4247.00275	19.01539	7270.38610	515.79555	2.23026	0.04508	544.99678	0.45938
590	4367.41504	18.79692	9614.92566	363.24899	1.89514	0.04236	369.34256	0.33649
591	5010.59928	9.98038	9311.88212	249.19712	0.54194	0.00486	361.36306	0.15809
592	4753.77794	14.67254	9451.48831	392.85164	4.76571	0.02755	574.22085	0.32877
593	3505.53499	15.38652	11578.23727	315.40784	1.18525	0.08463	247.59804	0.43638
594	3692.57049	14.14522	10399.76246	482.19850	0.51135	0.05774	462.81151	0.58531
595	4479.29583	20.71026	9703.14282	275.13133	5.84990	0.10341	263.94803	0.51500
596	4523.03166	20.85602	11767.48765	673.10560	4.47347	0.01728	856.29078	0.31485
597	4462.68985	21.72798	8024.91359	404.73360	3.83267	0.03044	483.35317	0.36565
598	5003.85708	7.80312	13084.64448	124.98165	1.32834	0.00234	152.47693	0.06590
599	4056.05577	11.58870	14690.85507	130.24003	-2.15234	0.00288	139.18515	1.25135
600	4802.09986	16.90044	9942.47145	671.73914	0.52484	0.03198	883.06896	0.36219
601	4710.52742	15.79219	11051.16561	454.42241	2.99552	0.05175	617.62453	0.32528
602	4643.54284	20.77578	9178.98925	401.40054	4.42301	0.07059	476.25567	0.49588
603	5093.31812	13.34457	10150.54698	75.76482	-2.09974	0.00098	64.47746	0.37804
604	4890.37666	9.40312	10117.84197	549.90144	1.83019	0.03159	728.59474	0.40087
605	4556.97715	20.52494	17107.04998	462.20938	4.63701	0.09694	596.90814	0.39198
606	4779.01452	10.37340	11640.33830	598.40736	-1.13626	0.00939	816.01501	0.13265
607	4247.09060	19.01611	7264.46902	578.67358	4.05764	0.04662	617.87527	0.45877
608	4759.35754	18.17676	10716.54942	645.43355	0.83318	0.03272	822.40489	0.35995
609	4885.06362	19.81515	11125.94339	434.73815	2.28197	0.05975	600.30581	0.39105
610	4767.37456	8.09130	9395.41064	312.59207	-1.82593	0.00300	448.73871	0.07256
611	4345.20590	23.78774	10431.39671	880.41271	3.52593	0.03262	921.61866	0.55439
612	4977.93374	9.90309	9391.71798	370.67080	0.39355	0.00692	520.78953	0.14587
613	4237.12757	23.41257	12375.72758	1001.91016	3.34208	0.01092	1103.31052	0.15720
614	3855.94971	25.27649	6738.63113	70.76843	3.41942	0.00594	25.40500	1.60627
615	4878.85158	7.75476	10011.33813	464.39942	0.25526	0.00803	620.93515	0.23978
616	4658.61070	19.51687	12325.83666	394.69499	4.85889	0.09662	526.68433	0.44234
617	4604.71551	22.17449	10971.77210	427.57524	5.41416	0.06774	500.98373	0.58067
618	5008.82097	10.08969	9142.93734	346.17578	0.37258	0.00468	516.39288	0.15054
619	3616.04103	13.30239	20682.77211	233.41389	1.04059	0.01607	277.36005	0.24880
620	4575.16490	10.47728	9318.94382	353.93695	-2.56157	0.02111	432.59895	0.21351
621	4339.08319	17.14026	8212.90318	364.56028	3.03210	0.03787	318.30936	0.36058
622	5012.78877	10.00168	9471.58224	302.37948	-0.87820	0.00485	449.71310	0.15195
623	3105.72408	18.12501	10180.66714	411.86697	3.77178	0.17757	377.39124	0.82948
624	4665.11847	20.13141	8159.71711	355.52432	4.54287	0.04761	498.98359	0.24857
625	4328.78163	15.86060	9181.76714	462.36261	7.45301	0.11895	628.61359	0.43741
626	4735.44524	21.70571	10143.22838	520.92173	4.00566	0.06743	649.37711	0.48163
627	4969.15477	17.22341	8722.68713	714.47595	0.35285	0.01810	920.42758	0.26987
628	4669.51444	20.15507	9978.29423	446.75740	4.24717	0.04713	640.21130	0.24606
629	4769.83790	8.15764	9891.60655	342.55277	-3.53533	0.00277	497.41211	0.06757
630	4441.45140	21.74339	7592.70199	571.36812	2.63553	0.03106	723.66108	0.31517
631	4920.15703	10.81880	8633.78881	90.16643	4.05595	0.00669	78.11639	0.09698
632	3219.22252	16.51370	12225.85826	322.06374	2.13663	0.08347	231.17329	0.79968
633	4982.23609	9.97149	9447.07261	294.74778	0.27254	0.00680	402.33639	0.15924

634	4239.65424	24.68780	8280.13117	701.32111	1.83122	0.02108	789.81421	0.30626
635	3582.30792	13.19058	5370.50251	586.98179	0.88313	0.04164	558.78524	0.56998
636	4639.52223	7.48564	17937.44435	97.48663	-3.81576	0.00002	112.25427	0.10586
637	4002.73514	18.30107	14266.06077	96.45549	1.09637	0.01225	68.37248	1.43701
638	4198.99872	21.01303	10552.30821	628.39131	2.74351	0.03369	596.58686	0.54646
639	5011.90580	6.81077	9327.32894	153.98620	-2.36360	0.00122	201.40377	0.03273
640	4739.27581	21.78616	10188.33039	375.54440	5.05832	0.05247	469.67862	0.49429
641	4367.33374	18.88704	9568.00340	488.35612	2.79815	0.04384	544.11662	0.34816
642	3151.70840	20.07425	10476.16413	554.26922	4.36426	0.12814	421.90074	1.26224
643	3222.39724	14.52232	10069.66252	374.68332	3.32724	0.08111	387.69333	0.44606
644	3361.46723	20.21518	10873.23672	221.49241	3.23714	0.01304	241.62067	1.05873
645	4698.16371	19.14897	9862.23494	639.22171	1.50786	0.04874	806.20233	0.30528
646	3606.84385	13.22940	20144.35620	387.82187	1.52049	0.02183	476.49508	0.40467
647	4333.94958	17.20939	8152.43906	491.02205	4.11173	0.04511	474.00060	0.42524
648	4455.25738	19.56347	5699.74389	534.79817	3.65521	0.03328	619.37380	0.41516
649	4794.04792	10.34127	11103.61432	428.27220	1.56323	0.03014	530.06870	0.45488
650	3697.44993	21.71852	12276.75479	102.93859	3.70899	0.01257	68.15515	0.75279
651	3753.77882	12.42415	6482.45251	315.94915	-0.40336	0.01416	336.54403	0.41552
652	3700.77458	25.34957	12907.82833	68.73120	2.79143	0.01053	21.92965	1.56363
653	4713.22762	17.87154	16182.44651	417.42663	3.02832	0.02454	558.38732	0.21999
654	4445.63070	19.99770	13389.83695	447.88133	6.07922	0.10705	517.49744	0.31688
655	3474.68797	13.91980	7302.51548	522.65470	1.95486	0.06360	484.26281	0.55854
656	3239.88357	17.07480	7100.23240	362.70681	2.04230	0.10872	277.05050	0.68070
657	3908.22958	24.67487	10045.92103	1437.67475	7.45995	0.01407	1295.28016	0.36901
658	4241.88879	19.17691	7232.52634	510.69522	4.13182	0.04750	542.04569	0.49786
659	3754.68548	12.94905	13578.86202	158.49273	0.26434	0.00483	148.35376	0.35448
660	4425.66707	11.53593	8397.63835	579.29872	-0.21508	0.01171	714.93837	0.24123
661	4399.83397	6.57534	8087.88042	468.88627	-2.57000	0.00348	620.59424	0.06659
662	4649.30291	22.37593	9745.61734	596.14469	2.79460	0.03391	757.53262	0.44891
663	3134.36117	13.92861	8602.76837	548.95574	4.12526	0.31780	384.26968	0.84343
664	3833.29233	15.80404	8630.64002	702.45785	2.44208	0.03181	695.43574	0.52859
665	4381.16590	18.72562	8625.00498	669.94262	1.55708	0.03740	740.39517	0.37357
666	4644.30569	20.79202	9172.98252	348.24068	5.08330	0.07393	399.35890	0.50133
667	4338.42691	17.12884	8212.12826	410.09185	1.81807	0.03920	386.18010	0.35132
668	3113.72173	19.73513	10643.16424	471.62534	3.86076	0.12886	316.78924	1.20011
669	3624.77295	23.25029	5129.96229	546.10853	7.10571	0.07560	546.17246	0.54283
670	2571.96368	15.24572	10992.34513	390.87686	5.74230	0.25777	349.26792	0.75353
671	3487.53654	13.78223	7414.86979	513.23647	0.50423	0.05243	473.07581	0.71871
672	4692.10584	15.38904	14120.43517	331.85389	3.98281	0.05712	458.02422	0.31715
673	2543.81651	16.87107	3561.15778	454.22752	5.58890	0.09421	460.49315	2.02298
674	4756.99439	21.60463	19554.24705	460.35542	4.80019	0.03697	586.58854	0.33413
675	4522.62589	19.93410	7355.88562	604.70125	2.02010	0.04678	744.66429	0.43685
676	4409.61136	22.70546	8373.42275	654.79279	4.60790	0.01728	857.77303	0.29279
677	3915.35043	12.93042	12082.90987	347.98385	0.25498	0.03631	363.17351	0.44330
678	3599.49058	13.03309	24902.00961	304.76247	0.55284	0.01592	362.44246	0.30462
679	4381.05544	18.73396	8621.98473	591.36863	1.77777	0.03921	648.90237	0.37019
680	3776.90804	9.59519	8271.13081	405.50575	0.28852	0.04431	367.29612	0.60493
681	4671.00860	20.16685	9972.54052	342.01791	4.20835	0.04504	472.27044	0.27697
682	4033.07270	25.75998	8828.31922	839.90728	3.89777	0.01686	907.85711	0.45217
683	3635.88365	12.66591	27125.93427	211.15750	0.11469	0.01486	204.43485	0.48513
684	4287.01267	17.67918	7494.29332	613.11384	2.86135	0.04249	640.85428	0.49904
685	4748.50719	16.00289	21029.70113	398.29947	3.07782	0.05343	543.36343	0.62569
686	4466.65412	20.38911	10265.89200	586.23046	4.17723	0.02087	738.66602	0.31744
687	4911.09328	12.73913	7834.69480	278.52681	1.92868	0.03763	354.21504	0.32286
688	4331.96766	18.55187	7793.17031	462.26060	6.67032	0.09748	556.82665	0.45893
689	4414.18177	17.85397	7171.85629	638.90846	2.13211	0.05328	731.49461	0.37830
690	4367.51507	18.85875	9569.49799	428.96267	3.32648	0.05286	450.89435	0.37101
691	4720.53333	29.64461	11339.96869	34.57334	-0.33988	0.00090	4.69885	1.69987
692	3335.86335	24.26070	11543.99878	669.16829	4.75300	0.06798	613.90657	0.77113
693	3768.53827	9.60080	8347.55958	469.67038	0.59248	0.05455	458.63241	0.50497
694	3610.86548	13.24489	20582.74725	223.87942	1.53604	0.01637	239.27004	0.26792
695	2920.17339	16.94402	14722.42875	305.82271	3.81436	0.23809	198.61283	0.71862
696	4527.72039	20.05027	21819.66420	427.87534	5.93685	0.11715	547.91436	0.26366
697	4565.05876	22.53239	12822.18765	529.41468	5.76206	0.03458	645.77891	0.37191
698	3886.61869	20.31126	12535.53493	103.35441	2.90331	0.01137	68.02800	0.93251
699	4505.67384	16.68382	8497.76408	571.95411	0.14110	0.03492	708.74298	0.36903
700	3137.33247	16.79866	9535.73265	452.28689	2.81499	0.19230	363.26068	0.66016
701	4826.17755	22.36693	10522.60202	736.03867	3.13089	0.01997	948.41007	0.27712
702	3673.28481	14.10214	10018.76878	538.50159	0.83407	0.06364	562.95407	0.65409
703	2915.15885	16.20452	15966.69299	297.66302	3.71432	0.22426	271.55109	0.84909
704	3737.98314	12.95665	13663.93794	126.83569	-0.79396	0.00348	132.95829	0.24206

705	2980.50916	24.89310	7040.75706	476.78478	5.85823	0.15034	254.92293	1.04335
706	4770.41057	14.71872	11059.67008	319.62131	2.52101	0.01920	447.51964	0.38556
707	4338.19855	18.66624	7822.26465	378.67311	6.56510	0.08962	427.96750	0.47806
708	3656.21580	23.86060	10510.11029	1176.12534	9.57653	0.07188	918.25648	0.77520
709	4685.71139	13.69517	9863.51756	421.02888	6.15925	0.02377	518.69814	0.21866
710	4404.89267	18.22419	15033.62657	55.91930	1.32132	0.00735	13.08857	1.27310
711	3486.62372	24.08914	11481.99762	779.81160	8.36289	0.15614	443.73664	1.96651
712	5112.54029	10.95557	14084.24553	169.05132	0.16341	0.00242	247.11126	0.15970
713	4894.00330	9.46332	10018.45516	429.94073	0.06085	0.02445	540.47801	0.40973
714	3215.83562	14.46663	10033.69763	308.39838	2.88716	0.09320	320.94785	0.36884
715	4195.62558	21.01468	10525.50036	686.93146	2.43158	0.03467	732.75530	0.53791
716	4879.19874	7.75844	10070.03819	342.77701	-0.49715	0.00836	450.66122	0.24370
717	4694.55755	15.41858	14156.26719	401.93272	3.86140	0.06064	566.80687	0.34913
718	3286.34636	18.70488	18857.04823	435.66822	2.28899	0.20715	395.27012	0.92686
719	5021.84378	13.84719	8339.61279	424.78607	2.30327	0.01809	630.46349	0.16972
720	4774.29702	10.20068	11721.17809	368.80559	-1.90407	0.00746	491.25124	0.18941
721	4492.20907	12.53221	9284.42966	499.45994	-0.95538	0.02741	581.65172	0.27529
722	2977.38192	16.97618	15643.98750	369.56025	3.03752	0.13731	351.65732	0.83514
723	4604.91251	20.65465	22367.36883	524.67596	5.83141	0.09755	686.46222	0.48345
724	3983.70732	22.96449	7935.17492	793.79074	2.15404	0.03449	850.93423	0.52110
725	4813.14933	20.78387	7736.63285	514.81924	3.93767	0.05099	630.94699	0.41814
726	4576.17557	10.22615	9305.75473	377.26078	-3.95185	0.02060	480.25507	0.18885
727	4913.99856	20.00119	11546.86539	371.03329	2.56788	0.05067	500.39803	0.40978
728	4806.36616	22.31174	10805.46829	668.49481	2.89516	0.01410	864.87019	0.17775
729	4860.77344	8.99782	9318.53696	99.53572	0.40140	0.00373	86.36418	0.72559
730	4811.53920	22.38706	10473.64180	760.06903	2.96583	0.01541	977.50159	0.25234
731	4878.64862	16.86338	8598.91257	384.89961	3.21011	0.05099	497.05282	0.42033
732	4751.63472	14.64309	9502.90211	412.85766	3.25792	0.02477	595.20878	0.34334
733	4894.09454	12.79008	7348.14672	410.27903	3.09132	0.04037	555.59493	0.30194
734	4573.51293	10.36124	9292.15195	500.48193	-0.37189	0.03420	614.36418	0.28625
735	4665.10026	20.15476	8174.76639	374.66011	4.48784	0.04619	534.51410	0.24394
736	4481.84079	14.25078	21257.94349	83.02490	-4.04141	0.00026	56.36689	0.74807
737	3487.59351	13.79782	7414.06342	452.56340	0.66574	0.05327	387.61546	0.71431
738	3666.83904	21.51909	13137.95431	99.76893	1.93283	0.01541	53.97535	1.04121
739	3868.25089	24.39694	6325.13419	1166.30569	4.73623	0.01776	1080.71942	0.68719
740	4458.15639	19.58206	5695.27307	544.92452	2.44532	0.03272	642.25367	0.41011
741	3241.06948	19.78079	13375.11006	377.37840	2.56528	0.18384	301.10814	0.90911
742	3246.66360	18.18668	18203.34714	442.60070	3.34609	0.21907	361.58695	1.20638
743	2442.83356	13.60637	3630.12118	404.85566	6.06037	0.25191	487.36654	0.70391
744	3923.16911	18.58749	6871.47131	689.71551	6.55960	0.05713	630.48149	0.63799
745	4232.53062	14.63936	14372.67171	99.54585	-0.92127	0.00131	88.29200	0.97853
746	4044.14022	9.11166	11189.75668	260.68777	-1.09140	0.00887	358.76603	0.16742
747	4674.09055	20.15465	7801.60962	374.15136	4.88453	0.04712	526.10638	0.25387
748	4469.70730	20.41163	13677.42448	385.63045	6.52393	0.10415	432.12315	0.48355
749	4241.03631	17.40408	7590.10394	780.17415	2.05380	0.03031	861.07137	0.35250
750	3833.21163	15.81033	8618.15708	845.78178	2.76609	0.03756	812.62667	0.63567
751	4948.59143	7.26553	9545.40245	269.36006	-4.61826	0.00024	385.00902	0.02444
752	4079.72972	21.82322	8924.29871	688.38451	2.41608	0.02975	692.09854	0.50075
753	4890.37569	9.34794	10185.78489	403.57870	-2.05143	0.02356	521.05901	0.43928
754	3913.51206	12.92492	12467.38624	263.46126	-0.92086	0.03454	275.23594	0.32341
755	4706.92407	11.09869	15929.05992	129.38511	2.80303	0.00508	158.22325	0.24229
756	3060.76009	19.49826	10735.44744	483.09109	3.65101	0.12251	345.45037	1.04781
757	4783.24128	16.53199	9812.15404	518.21730	0.57720	0.02973	680.63127	0.28422
758	4874.96347	7.71480	9734.80828	435.01540	0.23923	0.00942	606.62262	0.25128
759	4944.67453	13.13317	9447.97639	373.70229	2.89411	0.00906	578.05159	0.19130
760	3865.68665	24.38532	6319.60974	856.22063	3.36641	0.01903	806.21735	0.72444
761	4457.79745	21.77166	7647.62645	361.58785	3.17390	0.03664	435.37195	0.25833
762	4512.47529	22.86617	7785.78583	342.78017	5.72977	0.15406	341.46590	0.70726
763	4232.86079	18.88139	6836.49468	670.22045	1.94722	0.04476	731.05213	0.54426
764	3539.72961	17.34311	8061.09847	379.80322	-1.22781	0.04324	357.29179	0.60112
765	3745.99793	12.32060	6410.39175	319.10539	-2.91307	0.01524	325.97919	0.39957
766	3404.52217	19.98800	7660.45616	114.15100	4.48966	0.01159	77.94543	1.19572
767	3594.33162	23.15165	9471.12875	1091.68333	9.43895	0.07120	816.48940	1.16642
768	4737.74879	15.91416	12178.13969	428.60519	3.14956	0.04598	592.74685	0.41843
769	3836.78363	20.21731	6310.74635	764.06574	2.21580	0.02842	724.92712	0.36127
770	4969.84080	17.26114	7946.57052	620.02426	0.90841	0.01831	815.94937	0.30348
771	4615.65885	22.40857	8681.36757	726.85739	2.42112	0.04114	900.25563	0.42293
772	4443.19068	20.43620	8267.99475	602.78638	4.06512	0.10925	703.71797	0.56343
773	4882.36755	19.78650	11067.59357	497.86491	2.97919	0.07582	690.82400	0.35144
774	4649.23509	20.88010	8746.73813	530.11615	4.68122	0.09415	622.09099	0.55527
775	4673.18478	20.19336	9989.99146	410.81556	5.04279	0.04080	579.47763	0.30423

776	3542.04698	17.36771	8058.62006	446.83317	0.42201	0.05282	455.58192	0.58559
777	5021.23267	18.12505	10063.04759	325.82043	2.00162	0.01465	460.73800	0.25671
778	4040.99227	9.18652	11738.61798	267.54600	-1.04184	0.00677	370.52299	0.12143
779	3380.54147	9.59362	6919.28684	483.01516	1.75983	0.05506	503.43358	0.53465
780	3140.77935	18.31701	10285.35770	518.07818	3.45370	0.18479	489.24212	0.79277
781	3638.42093	17.53174	17139.13184	420.57193	-0.03411	0.09830	386.00936	0.95713
782	4666.11288	18.77762	12270.29257	519.79989	3.81396	0.04531	664.19610	0.34880
783	3396.50121	11.71418	7562.88226	599.14996	1.34056	0.08116	474.89099	0.70592
784	4380.40629	18.88046	8600.89889	564.60520	3.04343	0.04011	587.99376	0.43287
785	3396.17980	11.75064	7605.17053	612.51194	1.50684	0.08439	549.86209	0.57644
786	4768.39391	8.13233	9563.76204	426.22427	-2.69748	0.00328	615.02725	0.07791
787	4890.64658	19.87207	11177.08920	452.58941	2.88724	0.06213	622.13881	0.39249
788	4788.58640	16.67039	9866.71410	481.78923	0.69379	0.04350	623.70472	0.35746
789	3379.90460	9.58761	6921.78055	413.27794	1.93793	0.05800	397.65016	0.54520
790	4350.63062	18.87254	7898.56881	526.79927	5.87861	0.12896	667.59788	0.48657
791	4767.98465	21.64886	20230.62944	672.52016	3.79038	0.03543	881.55759	0.34575
792	4844.65265	15.77082	8821.71053	355.18062	2.69174	0.02551	518.34010	0.24386
793	4569.62131	22.53360	13111.78921	375.45223	5.76247	0.02766	433.23659	0.42219
794	2917.97599	16.56673	15044.45268	298.24298	4.21301	0.19782	276.12145	0.66890
795	3733.82733	13.06267	13721.09913	163.22710	-0.86421	0.00369	180.39980	0.24961
796	4129.86534	12.94042	12589.56687	291.55194	-0.28709	0.00585	368.95770	0.15984
797	3524.81196	17.29744	7944.12599	486.05135	1.11093	0.06917	507.56247	0.60232
798	4828.62299	14.31414	10782.28144	404.53487	3.05614	0.03009	608.99778	0.20188
799	3844.07667	20.22839	6348.84981	759.72179	2.39722	0.02329	765.79820	0.51577
800	4107.41713	12.47582	15508.49613	104.49976	-2.35542	0.00252	89.59114	1.27655
801	3582.12112	13.23870	5363.66216	566.41862	1.56009	0.04360	540.37398	0.56937
802	3691.06917	24.57079	6220.47263	609.44908	2.67266	0.03357	570.99268	0.47933
803	4711.90282	15.83614	11381.31280	406.55733	5.08582	0.05606	528.17333	0.38344
804	4400.15442	15.26859	24628.47331	97.03016	-2.39796	0.00033	88.80955	0.27911
805	4747.69971	15.99489	20771.25589	352.02054	3.55344	0.05379	474.16600	0.63536
806	3904.01990	13.52079	11264.51811	370.94973	-0.77351	0.03111	381.59851	0.48653
807	4946.46977	13.17301	9384.89512	442.44397	4.55694	0.01094	661.89556	0.13515
808	3792.15525	19.38531	12340.19176	375.09510	-2.23542	0.06817	331.10990	0.93229
809	4580.27166	17.97098	8264.03051	457.38375	2.65815	0.02704	590.51546	0.31476
810	4699.19048	18.30953	16552.99484	413.10148	5.78548	0.03506	549.68141	0.12103
811	4505.86742	11.27250	16780.99198	89.63026	-2.47585	0.00009	94.50692	1.14369
812	4694.95137	13.69554	9890.95914	350.81712	2.83057	0.02083	417.26943	0.23969
813	4601.48426	22.28825	8589.56042	654.45820	3.42493	0.06449	810.18180	0.33362
814	3163.84198	15.78417	12075.09197	293.85938	3.97342	0.11782	137.61894	0.62472
815	4607.34246	18.93246	8429.42940	453.67737	4.55773	0.03918	593.98614	0.27799
816	4525.45255	20.94489	15223.68669	639.11141	4.46451	0.01308	786.68790	0.25316
817	4116.66757	15.95967	14242.62778	93.97143	-0.78637	0.00288	75.04768	0.87519
818	4617.31333	18.61933	8335.38217	368.86253	4.39177	0.03138	465.21137	0.35719
819	4519.47654	20.88165	15153.85516	668.76898	3.65485	0.01556	823.15706	0.24089
820	3331.41541	24.28516	11539.26306	572.37423	3.82304	0.06387	526.15152	0.68213
821	4365.05105	20.37788	9920.03180	561.87077	3.59238	0.05068	604.76509	0.36904
822	4637.30499	16.97189	10121.57168	479.37796	4.94532	0.06779	666.08803	0.55097
823	4678.88388	10.73030	16715.76854	119.74436	1.72145	0.00867	132.20757	0.40271
824	3942.29126	18.67076	6928.56811	673.48444	7.17441	0.05601	588.72449	0.56311
825	4486.38885	21.01091	9239.45602	628.83798	3.26463	0.04286	801.48303	0.38909
826	4928.61931	7.61473	9088.53947	220.79685	-3.32705	0.00046	307.14362	0.03146
827	4670.63477	16.61915	17904.86705	329.88247	4.75122	0.08789	439.10802	0.47721
828	4957.51854	6.62418	10611.17290	403.88341	-3.00540	0.00605	588.10773	0.18248
829	4941.60525	13.06190	9396.42199	382.19764	1.89086	0.01073	577.79478	0.14220
830	3166.99112	15.86753	12047.86504	491.57781	3.31151	0.10878	440.36434	0.74595
831	4298.29192	15.22890	12192.63935	386.77278	-2.63884	0.01972	455.46266	0.33541
832	3394.39167	11.66538	7609.60761	459.78696	1.25873	0.08222	383.69840	0.63292
833	4450.75372	19.81162	8020.56821	406.65258	5.51116	0.07569	465.46240	0.59610
834	4195.48379	21.01381	10535.01542	632.96308	2.19901	0.03361	623.28440	0.55182
835	3532.55061	15.25251	11894.55577	452.61392	0.33318	0.07086	410.24105	0.56180
836	4773.91563	10.16372	11787.02582	546.15809	-0.05107	0.01413	741.88974	0.12230
837	4010.05690	9.29830	8972.42926	299.30432	-2.94697	0.00656	354.72029	0.23525
838	4878.90332	9.30131	9216.83379	70.95660	0.36001	0.00327	33.70904	0.70009
839	4412.18165	17.90625	7001.77740	710.34748	2.76950	0.03300	759.60311	0.46203
840	4952.10350	10.75613	10157.43082	138.95498	1.19312	0.00320	171.67235	0.25247
841	3134.76242	18.15689	10144.06535	295.18797	4.00110	0.18942	153.31717	0.84721
842	4958.24202	6.64175	10859.82968	254.78398	-3.38761	0.00592	339.12417	0.20080
843	3389.57367	17.96278	19461.49849	403.27160	1.45156	0.08270	310.04316	0.75106
844	3868.86585	24.39385	6321.02718	907.24470	4.78236	0.01704	947.11138	0.68796
845	3793.87032	24.12423	10987.09974	692.69706	2.73498	0.04690	705.00226	0.83608
846	4490.47343	20.49268	16577.12038	709.94829	3.59090	0.01371	855.99012	0.28281

847	4875.81588	7.73379	9578.98695	477.94356	1.22613	0.01227	668.08088	0.20328
848	4642.59723	20.13482	9503.26870	378.65682	4.79641	0.04511	523.55969	0.34564
849	5012.75693	6.82915	8871.43439	296.79455	-0.75272	0.00129	451.83487	0.03301
850	4872.22598	16.81581	8554.12378	235.45132	3.37050	0.06475	260.30421	0.33288
851	4617.39410	21.71266	15565.85043	428.56290	5.87463	0.08023	494.34079	0.52284
852	4965.44078	9.81978	8597.49677	403.62312	-0.19986	0.00637	577.00642	0.13934
853	4950.95791	10.72039	10098.40918	131.87633	0.57493	0.00296	170.75039	0.28168
854	3391.83119	9.61697	6810.15417	391.67565	0.74583	0.05029	353.12086	0.52744
855	4332.85841	21.89781	8649.15758	721.48227	2.25845	0.04634	743.05730	0.53576
856	3733.71596	13.16578	13684.53093	225.38730	-0.64723	0.00504	278.65350	0.34065
857	5177.93228	15.20886	9864.34532	41.81169	-1.62243	0.00017	20.56756	1.26201
858	4429.18739	14.63206	6225.78909	622.24761	3.21687	0.02698	689.08322	0.33275
859	4441.40202	20.39359	8263.17537	466.31771	5.98943	0.11001	510.77464	0.56540
860	3271.16497	18.37737	10243.70798	414.41630	2.88351	0.18152	332.15192	0.85627
861	3613.90662	12.37436	30924.08702	267.97297	1.02661	0.01705	277.13023	0.44317
862	3576.05055	13.36013	5151.52030	719.92986	2.54562	0.04076	691.79216	0.73279
863	3735.84276	11.62362	8715.72091	649.15264	0.63781	0.03169	646.64033	0.57598
864	4637.11836	16.97174	10098.91436	329.91363	3.30912	0.06266	447.29511	0.54288
865	4779.39285	10.39262	11644.42610	571.41239	-0.55000	0.00981	758.06566	0.13827
866	3427.64452	8.07256	13612.72309	354.34299	1.70310	0.03469	363.41467	0.43191
867	3542.45793	17.37223	8059.73914	363.76194	0.07312	0.05322	345.34062	0.57515
868	4696.00899	13.66322	9901.34811	365.28545	3.51906	0.02079	428.90384	0.24472
869	3103.18802	17.38869	16813.62825	405.68298	3.01186	0.19956	299.49548	0.97293
870	4980.98458	17.63888	8848.36075	699.81514	0.55381	0.01771	927.04435	0.28309
871	3575.21219	17.68258	7356.18328	463.98557	0.48010	0.09289	443.24152	0.76006
872	4230.65495	18.86282	6815.47472	805.14440	2.70662	0.04245	839.93222	0.56588
873	3756.19220	12.48830	6500.12336	376.48298	-1.16381	0.01504	414.41143	0.41356
874	4241.60132	19.14745	7227.39063	431.70870	4.24314	0.04807	401.24801	0.50308
875	2577.75849	15.04802	10974.21598	530.80793	5.44094	0.27794	476.95454	0.71663
876	3382.65834	24.43414	11953.19259	553.78750	3.12163	0.05030	468.57808	0.65581
877	4513.48405	21.20295	10024.87060	279.51119	6.57118	0.09073	284.69468	0.53423
878	4574.78619	14.29410	21048.28609	68.50553	-4.11228	0.00005	33.00330	1.02029
879	4374.22778	20.36554	9974.43376	609.99402	1.62726	0.03778	691.75228	0.42669
880	4430.48193	20.11689	8105.59348	532.39483	5.75106	0.13358	568.14687	0.59905
881	4215.53031	15.25798	13316.79694	96.87737	0.34257	0.00135	84.99745	1.03126
882	5003.07180	7.78286	15194.39921	144.16461	-0.96444	0.00221	189.01686	0.06359
883	3964.46475	20.03696	9214.84790	777.85755	6.65515	0.05804	666.00267	0.70792
884	4779.28539	10.37834	11757.67006	472.70675	-0.46559	0.00868	643.39646	0.12918
885	4663.71572	16.47917	16566.86088	422.33837	4.27446	0.10128	573.55198	0.43793
886	3216.41711	14.48759	10034.73396	275.61290	2.80086	0.09396	240.68255	0.35492
887	3903.20499	24.71780	10044.45427	1095.30000	4.98746	0.01093	1017.79101	0.35580
888	4572.80709	7.59464	8655.54414	337.89687	-2.44953	0.00455	482.59995	0.10190
889	3740.26492	12.93934	13740.92629	142.23028	-1.06475	0.00358	148.90852	0.23496
890	4408.42011	17.84080	7010.16622	673.89891	3.10499	0.04197	709.82999	0.41942
891	4237.92081	19.25202	7210.65729	645.79316	2.82745	0.05052	731.42648	0.44215
892	4669.07431	20.15091	8191.32727	361.21241	5.01436	0.04777	490.55110	0.30014
893	4911.71775	12.72791	7781.49116	330.70973	2.65737	0.03350	438.45249	0.31471
894	4804.82842	22.30068	10788.51599	522.99564	2.63011	0.01367	685.40777	0.26901
895	4944.59137	13.12953	9376.16093	398.76450	2.84903	0.01012	602.60233	0.19752
896	4244.45166	17.30819	7629.20226	618.84668	-0.42167	0.02093	691.63469	0.52816
897	3754.95907	12.41335	6492.71508	313.53011	-1.51798	0.01540	344.27349	0.33211
898	4525.19712	20.93969	11825.37733	606.92177	3.81776	0.01330	767.58028	0.26859
899	4760.33173	21.58707	19535.75760	513.03016	5.41499	0.03726	666.86040	0.27570
900	4502.15612	16.66486	8869.35212	461.39984	1.45806	0.04176	523.99870	0.42310
901	2980.79943	16.72160	16792.37122	393.09904	4.23530	0.24083	323.64501	0.99324
902	4688.94465	13.75808	9710.03271	429.80688	2.32435	0.02171	536.57818	0.21999
903	4687.46511	21.35703	17792.60478	589.82032	5.44980	0.07474	741.89211	0.58069
904	4737.72583	15.91295	12175.45736	532.82872	4.04030	0.05002	734.50191	0.42788
905	3766.93456	11.92816	9280.58884	596.54329	1.63629	0.03107	557.17554	0.55469
906	4926.03297	7.63155	9083.08082	392.01320	-3.04772	0.00043	586.10188	0.03099
907	3146.91944	19.32040	8037.43028	563.86871	2.85982	0.14978	447.86750	1.92471
908	4505.83276	16.69523	8851.30902	484.79254	0.92233	0.03265	575.99262	0.35369
909	4371.50835	20.41865	9919.75186	555.16844	2.20355	0.04306	646.32266	0.46146
910	4646.90769	20.88052	8749.07070	509.93752	7.11553	0.09454	632.76914	0.56627
911	4536.95999	20.23893	20368.46856	480.68914	5.70196	0.11176	614.53596	0.44580
912	3680.47759	7.67969	5906.46984	494.20608	0.29169	0.02525	499.21170	0.52921
913	5003.06096	7.78072	13757.03038	214.81624	-0.76790	0.00202	323.65582	0.08929
914	4719.12969	19.30003	9886.70788	536.94851	1.89622	0.04174	685.46962	0.28710
915	4097.43376	21.14068	14694.11162	77.15190	2.41568	0.00880	31.72305	0.70770
916	3650.71854	23.38277	12860.22394	80.31258	3.43639	0.00712	31.79713	1.07021
917	4196.60237	21.00522	10537.57809	723.35055	2.94470	0.03504	733.52658	0.50795

918	4408.27322	22.74100	8372.75249	609.15511	3.90868	0.01422	833.76553	0.29134
919	4851.87667	13.67091	11918.80318	484.11248	1.34502	0.03790	630.91603	0.39297
920	3931.72071	10.46829	12829.76204	157.11753	-1.74082	0.00515	144.35353	0.31493
921	4198.27123	21.04126	10545.17842	544.63141	2.04245	0.03251	522.66705	0.52012
922	3452.81177	18.58554	19492.73733	409.60872	1.01899	0.08127	345.33232	0.80444
923	4894.40812	9.48426	10013.68956	475.73935	-0.43838	0.02530	611.45953	0.36394
924	4726.43755	19.34391	9876.64232	682.25651	0.17026	0.04367	875.96290	0.25333
925	4605.91198	18.86343	8414.39079	375.74337	4.72229	0.03292	484.70348	0.30610
926	3555.25705	17.47145	7352.91394	508.79205	1.17717	0.12486	500.16530	0.91216
927	4296.09684	14.38684	14163.87049	99.47389	1.05041	0.00135	80.81773	1.20067
928	4957.84432	9.91590	8201.15737	272.56693	0.72198	0.00449	404.16978	0.20193
929	3484.13154	18.85192	18792.02322	400.49766	-0.18566	0.05104	334.59270	1.71535
930	4836.29299	14.49226	10651.87078	401.36323	3.78822	0.03444	605.11641	0.19179
931	3736.28280	11.53416	8787.77224	525.40803	-0.86546	0.03179	501.63054	0.60675
932	4415.84789	17.86561	7179.47172	574.91544	2.14736	0.05141	666.67080	0.45530
933	2855.98284	15.33131	14850.20814	437.06064	3.76523	0.23419	392.02431	0.64218
934	4874.06481	16.82812	8563.14810	339.70040	4.10806	0.04571	450.00518	0.41335
935	3679.97071	7.66772	5917.37222	501.65884	0.77234	0.02521	530.63270	0.52920
936	3915.47648	12.93747	12081.66611	359.23601	0.31721	0.03409	417.58974	0.46033
937	3392.04445	9.60716	6802.20069	341.59598	2.19112	0.05155	320.39539	0.52509
938	3702.96483	25.48623	8121.06337	101.94188	3.57161	0.00694	54.89093	1.11104
939	4147.62642	16.39957	8932.36332	789.20093	1.89380	0.02714	868.37041	0.47029
940	5010.08288	6.80591	10456.04347	219.90450	-2.86341	0.00091	318.20987	0.03918
941	4687.08500	18.25468	16650.50986	376.92004	3.53510	0.02980	501.82589	0.15938
942	4441.28529	21.73118	7909.17906	536.56554	2.02724	0.02935	679.96001	0.30366
943	3755.71455	12.41906	6498.49135	350.72405	-1.58470	0.01540	381.31779	0.33220
944	4770.04825	14.73001	11942.61317	451.19516	3.45345	0.02109	646.50047	0.40232
945	4576.09400	10.38929	9311.83195	496.48639	-2.30114	0.02495	626.99374	0.18507
946	4086.04726	18.93305	6727.01386	849.15289	3.23548	0.06420	849.26748	0.62554
947	4785.02838	22.27391	10678.22093	435.25624	3.78777	0.05168	542.65157	0.51143
948	4768.23216	8.12361	9410.67677	252.38534	-2.98038	0.00350	338.82991	0.09057
949	3379.01706	9.65496	6899.75947	403.42638	2.09571	0.05913	425.05883	0.54940
950	4627.52746	22.27023	9828.05388	463.81595	1.34140	0.03874	581.38320	0.40362
951	3911.41884	13.55402	11166.27710	314.52947	-1.09883	0.03022	310.47535	0.50066
952	4419.36267	17.90863	7193.46100	499.56132	2.10286	0.03713	584.01587	0.34567
953	4706.22368	11.09199	15916.52529	130.14862	1.83554	0.00511	165.21712	0.22910
954	3892.94097	24.36083	6979.79953	53.32781	1.40277	0.00450	19.70874	0.96964
955	4199.21651	21.02516	10551.77340	733.13906	1.70497	0.03283	790.33674	0.53087
956	3195.74209	20.22136	10227.75640	639.61325	4.44754	0.14213	519.68061	1.21928
957	3703.44839	7.83459	6092.63394	344.66573	-2.53660	0.02080	340.07280	0.50657
958	4843.42328	12.53932	13064.21963	410.14430	2.77985	0.02205	573.58145	0.31309
959	4182.38676	12.32016	12528.02005	227.06040	-2.23082	0.00479	279.13491	0.22190
960	4806.37659	22.30990	10806.26489	616.94981	1.56592	0.01433	808.11364	0.18496
961	3541.90846	17.32607	8074.05251	382.22840	-0.45817	0.03952	360.20484	0.61992
962	3212.48197	19.32916	13081.41948	357.73120	2.86308	0.19129	240.60172	0.72669
963	3575.73593	13.28846	5287.23127	477.58032	0.90985	0.04590	440.87070	0.55060
964	4889.73370	9.42155	12720.97559	328.20531	2.22009	0.01798	497.45906	0.25513
965	4449.24322	20.46093	16214.50457	780.30804	2.83736	0.01636	983.49250	0.24810
966	3379.95156	20.14663	10273.52137	195.33361	4.89005	0.01658	202.61423	1.09347
967	4793.31278	15.81803	7410.47550	513.34584	2.68112	0.01452	744.69032	0.20511
968	4281.36939	14.21123	6834.67961	523.52179	-0.10949	0.02516	618.89191	0.27222
969	4646.19340	22.37295	9649.53527	518.24204	3.33214	0.03670	660.33982	0.50382
970	4297.79563	15.21687	12153.98982	513.03361	-1.57768	0.01992	615.81949	0.30074
971	3929.81771	18.61828	7258.82800	827.34879	5.82337	0.05644	772.09922	0.62855
972	4570.58032	17.91435	8314.20544	609.76429	2.70412	0.02625	798.00458	0.31396
973	4627.07192	15.30550	10137.46870	426.33243	4.93639	0.10119	584.34246	0.46817
974	4710.56031	11.11715	15926.57657	87.03326	2.29279	0.00468	75.18667	0.25751
975	4552.34210	17.76734	8332.70941	573.19769	2.42016	0.02699	748.48447	0.30738
976	2929.70130	24.88260	7019.69267	499.76651	6.52614	0.15522	299.04496	0.93438
977	4309.94105	21.90301	8555.51144	653.50433	1.67514	0.03294	702.19449	0.56635
978	3975.89910	22.94469	7896.71748	714.22382	2.74644	0.03535	742.40991	0.50698
979	3181.36218	16.47476	7081.49753	386.94521	2.52898	0.12075	288.07642	0.65928
980	3226.60027	19.71010	18047.60579	387.27504	2.13502	0.15362	329.40256	0.77602
981	4513.43033	14.19740	21056.00834	73.51842	-2.66710	0.00030	42.48836	0.75656
982	4675.04260	18.89518	12411.04781	477.79424	5.59546	0.04630	597.94706	0.38194
983	5028.71199	18.38075	9225.34332	431.61912	5.15599	0.01888	624.81686	0.17974
984	3130.04496	15.54098	6696.54563	367.36481	2.06508	0.01386	335.81025	0.19975
985	2454.86918	13.94127	3974.63067	394.12766	6.49732	0.29691	403.77191	0.55453
986	4968.48780	9.88118	8896.94905	331.74100	0.90445	0.00823	472.59513	0.13813
987	3417.15429	19.20796	19574.58255	398.81163	1.27861	0.11107	321.97297	0.74451
988	4448.94138	19.76896	7946.39265	550.94408	6.28995	0.10634	659.84343	0.58544

989	5044.97452	13.48629	8943.89493	236.87942	1.33120	0.01307	333.07611	0.20055
990	3504.21682	9.30524	8019.16890	432.47718	0.47882	0.03817	370.96612	0.45164
991	3137.39360	13.69705	8591.84902	530.40885	4.37458	0.31368	445.32899	0.74794
992	2966.62673	16.98430	15451.17140	389.33869	3.50996	0.13994	386.91692	0.82874
993	3387.31655	20.37025	9999.84400	94.52603	4.55531	0.01760	54.36524	0.99968
994	2938.82449	26.33817	12775.65051	714.98120	5.09253	0.11368	480.63166	1.62655
995	4399.20556	6.56002	7880.56464	392.60613	-0.24768	0.00383	527.99273	0.06831
996	4750.71308	14.78332	9660.20033	298.96901	2.97672	0.05504	397.72972	0.58546
997	4423.66537	11.43477	8383.24446	523.79397	-3.45741	0.01103	647.81624	0.29740
998	4504.63801	16.53120	9004.63907	499.15988	-1.10830	0.02806	582.98630	0.43429
999	4645.92269	22.39097	9715.71154	642.79479	2.98661	0.04058	805.83270	0.45064
1000	4843.69232	15.29480	9746.82167	353.04444	1.95569	0.02489	512.95605	0.30971
1001	4836.89828	8.90567	9435.88463	112.41713	-0.52848	0.00383	108.42601	0.70873
1002	4608.19877	18.87998	7974.92296	379.37746	4.72357	0.03766	475.60999	0.26382
1003	4285.22457	15.10398	12213.18856	561.52011	0.88602	0.02611	665.44179	0.33010
1004	4974.27609	10.26548	8950.67010	270.20211	1.57307	0.00454	404.87411	0.12693
1005	4663.65537	19.54591	12893.62325	336.00383	4.85409	0.08761	427.29627	0.44273
1006	3770.61413	9.61008	8316.94220	432.44004	0.95308	0.04984	411.58089	0.47758
1007	4765.89695	8.11734	9269.90671	364.87282	-0.12587	0.00401	510.89905	0.10015
1008	3629.74171	23.26185	5159.43778	545.98559	8.73922	0.08685	520.83250	0.42707
1009	3832.77294	20.20660	6293.25454	835.13925	3.21394	0.02928	818.19109	0.45483
1010	4425.71174	11.53678	8415.42151	645.92266	-0.81509	0.01268	777.16216	0.21012
1011	3843.63547	24.39214	6296.20109	783.11914	3.87764	0.01736	738.19495	0.90431
1012	3217.27586	16.53218	12204.97491	387.93461	2.52517	0.08519	312.55480	0.73925
1013	4958.77476	6.66987	9714.48539	368.89524	1.23247	0.00856	539.10081	0.18689
1014	3693.93567	24.59004	6211.28297	618.36332	2.82115	0.03436	570.15228	0.45724
1015	3226.95125	19.56914	13181.65857	390.88065	2.03247	0.16377	315.09824	0.94648
1016	4790.26588	10.24633	11154.81333	537.54848	1.03153	0.02672	687.00525	0.41853
1017	4616.19033	7.79842	16757.81089	139.15145	-2.41890	0.00003	187.75007	0.08468
1018	4849.38240	15.82370	8859.42858	381.23496	3.63560	0.02857	570.84559	0.26563
1019	3535.37920	17.20810	8008.46302	395.77489	-0.45457	0.06825	409.09148	0.53438
1020	4873.27533	7.68390	9870.00349	415.86744	-0.60381	0.00832	583.00893	0.21927
1021	4615.32294	18.64206	8334.34752	505.94646	4.94789	0.03615	656.96698	0.36664
1022	3756.80758	12.50632	6501.58974	344.16697	-1.67130	0.01466	376.92649	0.41359
1023	3726.11574	25.54892	8014.06377	106.16599	4.52644	0.00678	58.04571	1.12745
1024	4365.07984	18.83068	9572.48136	465.15485	4.06435	0.05511	493.61102	0.32281
1025	4680.01750	20.16837	7837.56921	374.85007	6.08963	0.04705	521.96668	0.24193
1026	4615.75687	22.41378	8667.62845	696.90654	2.11216	0.04122	869.18095	0.39250
1027	4334.30252	18.29782	6873.43372	585.79648	3.65842	0.03120	611.35492	0.50938
1028	4898.98861	16.87002	8796.23735	383.93718	3.01700	0.04657	495.32896	0.42281
1029	4690.00560	13.76987	9854.24062	416.46144	2.53628	0.02064	511.14348	0.24178
1030	3371.87490	20.30299	10618.47486	233.50411	3.64538	0.02078	264.03990	0.95367
1031	4637.51115	16.97688	10124.57336	337.35335	3.43107	0.06292	459.63334	0.53108
1032	4662.00568	18.75497	12226.63498	541.53836	4.84769	0.04661	665.48964	0.39802
1033	3162.50098	24.94252	7781.86805	477.51090	5.17597	0.12972	262.46089	1.13806
1034	3241.68585	18.15610	18247.42674	476.99480	2.51126	0.20232	409.95207	1.12921
1035	4767.13383	14.80265	9583.24246	391.95449	5.84924	0.02771	571.63859	0.33349
1036	4805.81946	22.30730	10791.64560	608.87035	3.05103	0.01390	789.27355	0.17667
1037	5023.82756	18.27914	10083.23499	460.15307	2.81946	0.01883	657.35911	0.17657
1038	4661.14830	16.54251	17790.03588	403.08476	3.62916	0.08294	555.79090	0.42948
1039	4453.15829	19.87060	8010.46163	280.83944	4.76850	0.08076	273.99196	0.59469
1040	4881.72891	19.78044	11067.29945	454.01868	3.08967	0.07500	624.99280	0.36653
1041	4749.39340	15.99999	20817.69423	302.22511	3.41220	0.05186	396.54830	0.65030
1042	4791.75622	15.73496	7292.75694	407.75183	3.78603	0.01334	610.63129	0.21815
1043	4496.97830	12.63279	9338.88951	580.16523	-0.61834	0.02391	721.17950	0.25467
1044	3974.56245	24.27162	12068.98756	62.43369	3.26210	0.00938	13.91740	1.29757
1045	3656.50877	23.86265	10507.51645	1404.47269	8.92968	0.06907	1156.49514	1.00151
1046	4058.34858	9.06410	11619.79632	190.32120	-1.33858	0.00585	239.44493	0.13991
1047	3803.37045	23.70153	12142.40781	770.92442	5.84893	0.02447	823.86204	0.05173
1048	4666.52336	20.15325	8169.95851	406.74709	4.32276	0.04455	586.47104	0.23921
1049	5045.02490	13.48534	8837.89905	377.03605	2.06456	0.01348	557.42918	0.20221
1050	2967.35045	16.85701	15387.22493	370.23307	3.40839	0.23897	292.40421	0.72471
1051	3429.38078	8.10330	13701.71662	244.16866	0.90975	0.03397	236.08659	0.37307
1052	4642.35166	22.37657	9712.94377	665.07294	2.66381	0.04185	834.08058	0.46362
1053	3499.06999	9.25727	7966.12785	424.34678	1.58962	0.03934	344.29829	0.74108
1054	3800.92432	24.10625	11065.50433	628.08010	3.48491	0.03899	573.33898	0.82259
1055	4961.53674	8.63638	9572.36803	210.55381	-0.48119	0.00328	287.26663	0.16594
1056	3799.23685	24.11392	11034.57497	593.97558	3.16206	0.04156	520.33637	0.74025
1057	3925.01511	20.03589	9509.89346	823.92201	5.37830	0.05267	734.39139	0.59945
1058	4968.53205	8.60815	9392.15442	272.17860	-0.04286	0.00288	392.58359	0.16627
1059	4691.57173	15.38489	14131.93158	424.38219	4.39699	0.06400	607.24545	0.34927

1060	4630.37370	7.68186	16246.18659	117.32348	-1.50311	0.00003	133.37399	0.06997
1061	4423.26903	11.48164	8362.25379	541.41665	0.51212	0.01417	662.93994	0.16582
1062	4620.19076	7.86494	16258.81878	137.99642	-1.55839	0.00005	180.87597	0.08072
1063	4299.28557	15.21357	12129.56075	576.52237	-1.69795	0.01735	694.84083	0.31702
1064	4615.20895	21.68452	15540.39316	553.21919	4.54103	0.05945	661.51102	0.53343
1065	4575.98915	10.39686	9309.38099	455.79238	-1.91061	0.02156	550.01780	0.18431
1066	3593.02301	17.08084	17965.95482	394.63913	1.12263	0.08606	349.00081	0.71686
1067	4782.28626	16.50797	9773.25019	441.57689	-0.79153	0.03001	576.20731	0.37976
1068	3383.17783	24.42422	11978.31528	502.18533	2.83657	0.05112	395.49902	0.65713
1069	4266.92540	16.20715	7782.50964	790.91097	1.48460	0.04564	859.09498	0.46323
1070	4498.18709	21.28453	8796.07241	542.67754	4.93896	0.08031	616.86203	0.61256
1071	3133.63296	15.99468	9554.47601	458.85655	2.82174	0.18558	374.79100	0.67444
1072	3599.26109	13.02197	20116.11871	234.47107	1.33443	0.01750	257.85153	0.29455
1073	5010.18863	10.11838	8319.01334	335.93480	4.10550	0.00635	493.56434	0.13278
1074	4246.49231	19.01759	7267.21540	567.57343	3.42056	0.04438	611.18134	0.46267
1075	4423.58693	11.44009	8405.12877	593.79422	-1.44772	0.01049	730.13075	0.28091
1076	4174.32878	18.99718	8224.98076	812.80540	2.18354	0.03803	827.13331	0.50480
1077	4129.84758	12.94629	12604.95604	328.55205	-0.40731	0.00661	443.95716	0.15053
1078	4892.90531	9.54018	8032.88841	128.96146	2.09193	0.00531	147.15773	0.23096
1079	4264.01574	23.23353	13456.99700	816.74379	3.57985	0.00981	952.60064	0.12107
1080	3306.67900	14.63971	11481.90609	385.55871	1.58048	0.05710	371.83365	0.60835
1081	4637.34563	16.97363	10126.40380	419.63034	3.84837	0.06128	581.90874	0.50965
1082	4976.18044	7.10291	9006.92207	208.99247	-4.56417	0.00024	284.61571	0.03525
1083	3743.81563	13.01634	13546.34368	137.04770	-1.07495	0.00328	121.76977	0.29458
1084	4767.27504	18.35280	10675.35750	721.48526	0.67013	0.03743	932.27322	0.36024
1085	3786.04572	19.91702	9519.80428	460.72187	-0.52427	0.03271	431.02178	1.24755
1086	4745.35539	21.83912	10228.20712	532.71870	4.37745	0.06601	664.35958	0.46757
1087	4570.75160	22.55593	13128.58088	632.68875	4.50448	0.02548	803.03378	0.38914
1088	3235.42054	19.69922	13375.96180	489.42315	2.23151	0.17401	446.38042	0.89829
1089	3388.07854	9.53887	6802.92785	413.33296	1.78704	0.05036	381.26170	0.51498
1090	4744.40408	16.20435	20861.43581	304.22703	2.59010	0.05728	399.26626	0.65859
1091	2906.37028	16.53332	14891.43875	456.09036	3.78916	0.20240	420.10495	0.69948
1092	4756.54369	8.34065	9973.11498	331.66207	-4.13535	0.00300	459.36240	0.10883
1093	3379.54185	9.63260	6938.99807	392.36319	2.42057	0.06008	384.46594	0.53383
1094	3379.30734	20.34952	10214.79338	152.32068	4.59723	0.02007	133.22734	0.95301
1095	4691.62915	18.28403	16582.83116	434.46027	4.75114	0.03431	604.51778	0.12867
1096	4367.39155	18.79758	9614.51939	535.48576	2.72104	0.04062	611.27430	0.34198
1097	3159.26427	15.90424	6817.83200	232.48199	0.68562	0.01142	159.06723	0.31452
1098	4341.64722	18.73323	7815.96132	336.52062	6.78833	0.11290	384.26455	0.49208
1099	3137.22212	16.79654	9536.34198	458.80838	2.53402	0.19008	362.05484	0.66095
1100	4709.15679	19.22825	11506.95574	302.51033	3.20580	0.08483	381.57428	0.58069
1101	3431.37488	8.14053	12977.10564	364.43848	2.64416	0.03941	352.34216	0.46823
1102	4758.68404	21.57499	19591.88453	549.24109	3.69716	0.03682	694.75571	0.33011
1103	4488.44660	20.73516	9785.36732	503.11973	4.86668	0.10860	603.20248	0.53462
1104	4767.62164	14.72519	11879.92415	517.15458	3.31840	0.02150	734.44005	0.39480
1105	3130.94559	15.60305	6667.51087	305.64732	1.77944	0.01031	246.21018	0.23334
1106	4572.82110	8.23984	8630.26687	277.62973	-3.78808	0.00650	365.10557	0.19798
1107	4511.08972	20.82860	11690.75168	599.81451	5.59762	0.01832	728.36126	0.31238
1108	4571.51538	22.51134	12884.06366	511.20407	6.00998	0.03392	637.96035	0.35436
1109	4688.50245	15.34411	14153.91082	558.06339	3.51430	0.06350	786.15420	0.34634
1110	4687.24507	21.34927	17482.60986	444.12367	3.89011	0.06971	550.44457	0.58180
1111	2546.00166	15.38710	3756.72309	349.99106	4.92026	0.23065	421.66729	1.80292
1112	3784.40822	19.93887	9541.48768	435.06474	-0.54939	0.03458	392.33127	1.20797
1113	4423.05813	11.47544	8360.22249	531.59731	-1.27006	0.01386	639.53614	0.16253
1114	4784.60231	15.47648	7009.46343	324.82750	2.74760	0.01325	469.21719	0.24043
1115	3981.50457	22.98019	7930.36429	735.60997	2.35230	0.03520	779.37242	0.50626
1116	4977.32427	17.62534	8727.57140	688.01422	2.45392	0.02622	882.80398	0.31014
1117	5019.84509	13.79593	8463.27020	371.36734	1.36745	0.01597	547.47736	0.19736
1118	4372.95667	20.44985	9934.24199	488.57579	3.58468	0.04230	507.26598	0.49455
1119	4875.56085	7.72335	9752.52462	311.71387	0.90534	0.00974	420.47300	0.23825
1120	3272.01469	18.14833	9903.35992	368.35494	2.16417	0.12975	274.36642	0.86877
1121	4003.24368	9.35871	8714.23188	255.41086	-3.41060	0.00670	280.37283	0.24346
1122	4787.74783	16.65089	9854.05351	688.27218	0.98214	0.03981	885.23661	0.35428
1123	4535.54524	20.24447	20327.01865	377.01875	6.27620	0.11119	482.79686	0.41345
1124	3381.28610	7.63414	13547.67032	259.23635	0.92779	0.03080	196.04919	0.57405
1125	4849.81248	14.70594	10704.59596	360.25593	5.03557	0.03476	536.24611	0.19537
1126	3245.05253	18.23601	18194.46242	510.37686	2.95675	0.21246	421.07425	1.16386
1127	3766.80080	11.90835	9274.08339	612.40151	1.96444	0.02992	619.77385	0.64575
1128	3577.36485	13.36761	5214.73580	684.18731	1.52484	0.04088	663.25241	0.55973
1129	4675.91014	10.78385	16610.38913	109.75142	2.00364	0.00825	112.75151	0.46663
1130	3860.89405	23.84752	7244.18321	955.08156	6.00799	0.06043	999.06126	0.44794

1131	4947.36860	7.22317	9313.73724	299.63163	-4.57138	0.00028	436.38248	0.03190
1132	3626.16249	13.42841	29916.10433	169.46578	0.98831	0.01414	197.48199	0.24680
1133	4576.12619	10.22078	9305.25955	398.92615	-3.76862	0.01975	506.06559	0.36631
1134	4464.04760	20.32727	13549.13818	480.54481	6.25833	0.08852	571.70890	0.34572
1135	4699.14961	15.43596	14242.67394	406.72223	5.45114	0.06772	573.95342	0.27365
1136	2546.52558	15.04118	3619.94356	414.12715	5.77546	0.27186	369.86832	1.85551
1137	4515.60556	20.91031	11712.62989	552.12236	4.21978	0.01477	674.05818	0.23553
1138	4569.07889	22.51286	12918.39725	519.58018	4.10487	0.02386	671.74536	0.36256
1139	4521.33025	19.91867	7353.27986	581.73524	1.34707	0.05035	721.77592	0.44576
1140	4913.65301	13.67879	8095.44474	445.72297	2.98970	0.01501	665.76755	0.20720
1141	5114.15781	10.45758	9594.92505	72.05066	-2.32185	0.00071	60.93273	0.59605
1142	3801.51832	23.71207	12150.93931	769.27708	6.41296	0.02027	785.33777	0.05295
1143	4417.12870	17.81930	7200.23206	421.93934	1.20382	0.03056	478.86557	0.43722
1144	4574.81730	17.92261	8318.63391	474.89811	1.87994	0.02757	635.81337	0.31155
1145	4417.77776	15.53789	25083.30740	84.01979	-2.32347	0.00044	64.28433	0.35870
1146	3693.06360	14.09309	10418.67883	387.96502	-0.23315	0.05283	350.82323	0.68523
1147	2599.27848	26.32274	11428.00919	562.28524	7.64644	0.17907	230.18080	1.39525
1148	2915.16708	20.07018	8030.32922	667.50997	5.20162	0.27972	514.16769	1.00483
1149	2980.03812	17.03250	15789.64801	408.27056	4.03898	0.21270	401.54390	0.82745
1150	3572.37361	11.90758	20221.15986	201.47621	0.02019	0.02423	191.88909	0.52552
1151	4293.64264	15.02947	12165.38129	462.05949	-2.78113	0.01716	549.64356	0.37311
1152	3736.27518	13.15794	13696.84922	209.94416	-0.13878	0.00508	255.98716	0.25254
1153	4571.96698	22.55846	13120.78929	518.95201	5.84886	0.02351	649.64960	0.42490
1154	2927.46110	25.00492	6915.77807	577.75394	5.86470	0.15424	291.37102	0.92972
1155	4687.16587	18.22762	16601.74759	430.27499	3.96416	0.02941	587.44431	0.15008
1156	4691.02124	13.69474	9870.26304	408.39563	4.74576	0.02119	484.66818	0.24690
1157	4513.83558	19.81892	7357.56759	595.69730	0.99658	0.04672	722.70851	0.44870
1158	3770.55807	9.63686	8367.17829	458.77063	0.77233	0.04812	403.25100	0.57703
1159	4635.44458	20.74125	9149.16804	607.06737	3.94577	0.07671	738.56596	0.50464
1160	3824.24122	23.81315	12146.64780	808.64394	6.70965	0.01789	890.19474	0.06353
1161	3333.21760	24.28943	11549.24969	631.28441	4.42750	0.06286	565.01785	0.70409
1162	4604.95458	20.65304	21021.70499	390.04342	5.04597	0.07607	499.66150	0.48587
1163	4469.57081	20.41327	13577.91660	400.19725	6.22742	0.07792	453.61338	0.47593
1164	3133.93021	19.88458	10609.44348	454.62644	3.34015	0.13596	296.81039	1.23640
1165	3573.99521	23.31165	9344.07832	933.32359	7.38709	0.07272	712.87061	1.28162
1166	4977.78661	23.10821	10216.54724	310.14857	1.59946	0.04531	303.94698	0.79304
1167	4421.00582	17.92624	7198.38209	576.23137	1.16157	0.03098	690.70551	0.32170
1168	4835.20979	14.46606	10636.66377	433.34077	2.40371	0.02934	654.96193	0.23645
1169	3861.31922	24.40467	6376.71665	848.53805	2.59247	0.01830	809.18338	0.67498
1170	3488.86520	13.84015	7418.65430	508.85344	1.65586	0.05844	466.79738	0.60867
1171	4932.97309	7.59514	9905.26406	321.20424	-4.79860	0.00030	484.36020	0.03209
1172	2539.66587	16.15319	3557.15133	396.81629	5.20178	0.30541	398.22661	1.98971
1173	3839.05439	23.93617	7119.40306	755.04184	7.24955	0.07215	795.20271	0.43311
1174	4156.60230	19.49103	14926.33083	65.67982	2.02673	0.00957	22.89400	0.70229
1175	3681.83350	7.70757	5920.18696	425.63403	-0.61191	0.02479	445.05622	0.51960
1176	4179.29622	12.92310	12901.41075	166.66078	-1.08320	0.00507	205.72165	0.12043
1177	4605.98770	18.90914	8416.25803	463.17974	4.22420	0.04050	614.54156	0.32001
1178	3783.36836	19.05979	12554.97622	370.25517	-1.95556	0.06882	314.46387	0.74240
1179	3844.28996	24.40684	6301.84879	947.58755	3.32390	0.01672	930.52133	0.87888
1180	4349.48618	21.91030	8710.35402	892.22445	3.18699	0.04352	917.01259	0.54464
1181	4128.77908	12.84780	12713.67095	311.82643	-0.38875	0.01027	416.77967	0.23439
1182	4556.56115	22.53062	12750.84626	539.98038	3.87840	0.02788	666.36255	0.38627
1183	3811.95064	13.69999	18216.75989	190.20147	-0.18969	0.00483	214.05520	0.56255
1184	3893.87727	13.40852	11279.44697	378.44416	-0.21968	0.03415	392.06513	0.37162
1185	4568.82227	22.56639	12957.76592	623.73152	4.94015	0.02583	769.23594	0.39413
1186	4507.51155	16.68412	8504.32586	548.09626	-0.03741	0.03630	641.28285	0.43448
1187	4099.61035	20.17185	14881.32141	97.41969	2.51559	0.01282	61.17510	0.68223
1188	3130.59057	18.12267	10239.87505	475.78370	4.35494	0.19118	451.85117	0.87753
1189	4380.83244	18.74455	8620.67164	703.81792	2.01712	0.03598	773.81074	0.37084
1190	4611.74318	7.79881	16770.67595	143.99390	-2.98089	0.00003	183.37016	0.07371
1191	3131.64267	19.06726	10068.32365	594.02397	2.23707	0.17747	490.34860	1.72133
1192	4401.91668	6.54535	8146.17201	365.99999	-2.55850	0.00255	490.36339	0.11062
1193	4658.26311	19.51663	12326.24390	418.94417	3.73525	0.08993	564.19673	0.43851
1194	4767.30678	8.13069	9556.40069	362.13666	-3.43040	0.00303	512.03119	0.08165
1195	3829.99751	23.84226	12156.58360	717.79952	6.16247	0.01864	753.25885	0.06547
1196	4480.23734	20.67666	9705.24109	513.32807	5.29349	0.10518	604.82197	0.53933
1197	5009.01872	10.08967	9274.09369	327.40201	1.22315	0.00522	491.65275	0.14743
1198	4380.39411	18.87026	8599.04948	645.90385	2.34031	0.03799	728.15982	0.36932
1199	4178.42447	18.97942	8265.44478	724.81525	1.32006	0.03081	783.56585	0.57022
1200	5009.74792	6.80217	11476.84787	258.64620	-3.40025	0.00114	382.33425	0.03886
1201	3716.98896	25.43673	7668.17548	86.12508	3.90408	0.00646	41.26575	1.12000

1202	4338.87019	19.40906	6383.96734	515.34666	2.00306	0.04379	545.35220	0.54358
1203	4547.29364	20.96319	15709.35263	646.01703	4.08554	0.01227	783.15760	0.26560
1204	4367.15356	18.87090	9566.12611	431.26033	3.55720	0.04642	425.47765	0.39852
1205	3977.51203	22.95643	7911.10522	884.29818	2.32553	0.04479	873.71339	0.51054
1206	4965.74493	9.83136	8603.10189	401.03619	0.51575	0.00675	572.96173	0.14933
1207	4079.37192	21.86853	8908.25856	545.49666	2.06279	0.02857	518.82194	0.49300
1208	4575.57536	10.40424	9309.56931	562.87104	-1.50835	0.02481	713.02783	0.19143
1209	4958.56417	6.67223	10827.98619	310.41690	-3.89326	0.00651	429.21826	0.21407
1210	4713.24749	15.86750	11380.14857	524.96128	4.63958	0.05581	678.29194	0.39151
1211	4918.19965	10.82790	8778.95394	177.55856	2.68156	0.00673	246.13386	0.09183
1212	4795.78505	10.39538	11118.95618	488.56533	1.53085	0.03071	617.40830	0.43321
1213	4497.31217	21.28935	8796.07358	331.94182	4.17573	0.08179	316.89114	0.55770
1214	4758.65188	14.77376	11458.41094	380.43098	3.33564	0.02392	548.26314	0.33357
1215	4281.63757	14.16438	6882.10284	538.50451	-2.22422	0.02013	615.01898	0.47707
1216	5009.07092	10.09196	9269.15807	291.08164	1.78256	0.00512	428.08596	0.14952
1217	4604.69118	22.17402	10971.01304	414.59104	5.18297	0.06887	481.77790	0.59463
1218	4415.66595	17.86003	7180.49061	560.87981	1.59789	0.04245	678.40593	0.40771
1219	4240.38948	17.39748	7578.22669	607.66218	0.39218	0.02291	641.71599	0.47542
1220	4093.40865	25.71899	6847.15329	51.26555	3.00518	0.00156	11.05195	2.12342
1221	4890.19304	9.34473	10178.22757	515.34471	-0.95107	0.02053	672.32437	0.33021
1222	4134.93964	12.89031	12669.25977	299.62393	-0.39770	0.00609	408.95815	0.13008
1223	4974.57566	11.04396	10235.59381	82.15030	0.54887	0.00258	64.98404	0.33492
1224	5003.00038	7.77976	15195.13474	147.22752	-0.69855	0.00206	203.33744	0.06277
1225	3735.67516	11.59050	8724.11379	592.45225	1.12876	0.03053	588.91034	0.61793
1226	3192.30460	15.88575	12369.44218	337.22318	3.62323	0.10336	234.76645	0.76067
1227	4799.38876	16.85042	9918.05584	611.61161	0.79915	0.03234	794.92074	0.39170
1228	4475.68780	21.01924	9267.43760	458.90837	3.20679	0.04657	603.15248	0.39063
1229	3767.34976	9.57412	8330.19208	524.13211	1.32668	0.06352	478.33533	0.52381
1230	3573.49941	23.29104	9348.82207	1414.63189	8.89777	0.07264	1066.63126	1.29027
1231	4875.92727	7.73616	9580.86341	431.91110	2.41951	0.01275	584.66658	0.19902
1232	3767.23386	11.92547	9266.41795	740.03632	2.86213	0.03400	752.73583	0.60744
1233	3841.61134	20.22626	6350.99097	716.87155	2.03991	0.02383	740.25241	0.52140
1234	4147.01121	16.43436	8952.52159	745.42423	0.26780	0.02230	832.10548	0.38858
1235	4948.00380	7.25332	9816.12276	294.23475	-4.00355	0.00027	425.27644	0.03460
1236	4281.82572	17.72489	7494.06617	680.23893	2.84295	0.04040	698.90187	0.50648
1237	3182.08344	20.12132	10280.99962	542.31346	4.23740	0.14710	400.57014	1.20638
1238	3736.15875	11.52092	8789.24792	458.08917	-0.47235	0.03001	423.53013	0.61151
1239	4568.58269	20.63120	17908.63819	489.78043	3.75495	0.09420	629.39743	0.48169
1240	4070.44149	19.98306	14831.71752	96.44497	2.62924	0.01268	64.23795	0.57241
1241	4399.84774	6.57995	7895.86632	363.39690	-1.24122	0.00371	497.11838	0.06615
1242	4249.79526	19.07171	7255.31373	450.75791	5.08693	0.05586	438.06406	0.39996
1243	3538.67869	9.37530	7261.64082	699.62704	2.23022	0.04248	660.60489	0.69651
1244	2443.57474	13.70398	3739.08657	439.39315	6.33470	0.24035	409.36742	1.11977
1245	4453.27876	20.16133	13496.63711	318.64495	6.07779	0.10224	335.52273	0.34214
1246	3510.12137	15.35213	11653.37308	478.83106	1.49850	0.08767	440.34474	0.44100
1247	3331.81144	24.27920	11537.64359	621.59945	3.68271	0.05757	512.12273	0.67195
1248	2576.40854	14.99357	10780.19673	440.03418	5.64824	0.28629	357.40125	0.76600
1249	3860.68273	23.99020	12289.75925	730.79782	4.96000	0.01737	702.62541	0.07389
1250	4202.56324	20.99672	10551.76334	772.89600	2.43787	0.04203	767.04914	0.52321
1251	4788.89388	15.68897	7272.18433	384.05553	2.79992	0.01411	550.94722	0.19391
1252	3681.64872	7.68637	5923.30655	374.92488	-1.18528	0.02697	371.81606	0.46991
1253	4974.28036	10.26441	8950.56481	302.17762	1.54586	0.00441	451.62889	0.12962
1254	4685.18695	13.57086	9626.13549	477.62994	2.82905	0.02127	587.72190	0.24319
1255	3190.27958	16.65662	7058.72984	407.60592	1.97446	0.10060	346.64716	0.64216
1256	4147.32432	16.44298	8968.12239	707.45773	-0.13582	0.02116	759.15901	0.38334
1257	4899.75537	16.87928	8792.00355	271.04749	1.95277	0.04498	322.11214	0.42888
1258	3162.34485	15.81832	12021.68077	447.77397	3.05530	0.11037	367.16691	0.64418
1259	4747.57014	15.99473	20940.31087	413.71053	4.05077	0.06086	565.25228	0.64680
1260	3523.45643	16.71222	16908.69560	455.22959	1.86681	0.16358	397.62726	0.85778
1261	4470.42029	20.41401	13716.32985	561.15581	5.47687	0.10611	689.06493	0.45699
1262	4281.57038	14.16877	6881.23689	559.51763	-2.97170	0.02059	643.53653	0.48560
1263	4813.13671	20.77378	7728.35390	664.06780	3.01360	0.05042	838.57765	0.39011
1264	4411.59278	22.72700	8355.65705	631.56943	2.06899	0.01512	813.97026	0.29786
1265	4374.21969	20.45865	9920.99099	490.01911	3.08837	0.04297	505.34171	0.46764
1266	5008.84981	10.08858	9263.37822	279.59677	1.22132	0.00489	409.56317	0.15545
1267	3132.59534	15.59976	6661.69346	305.09216	2.40385	0.01543	199.57897	0.24463
1268	4606.83996	14.60636	20012.40317	58.15620	-4.98416	0.00001	19.37909	1.20566
1269	2935.73198	20.27781	8082.53546	485.01826	4.05409	0.25245	375.29065	1.07664
1270	4836.14236	14.47951	10644.74205	398.89610	2.99541	0.02973	599.54641	0.23743
1271	4236.70879	24.72204	8288.10929	699.32422	1.61488	0.01927	796.86696	0.37373
1272	3607.05979	13.19774	24923.43385	263.46964	0.66657	0.01586	324.25417	0.28491

1273	3786.04572	19.91702	9519.80428	499.47744	-0.80153	0.03260	474.13597	1.23165
1274	4897.00628	9.56718	10169.06254	489.30781	0.57677	0.02951	630.78254	0.37741
1275	4605.87846	22.28261	8631.79920	593.63003	2.42808	0.03978	733.01884	0.39405
1276	4178.58628	18.97983	8260.14712	725.70978	1.97064	0.03239	787.93913	0.54169
1277	4708.99826	19.22915	11504.56203	366.72473	4.28603	0.08347	478.27353	0.56906
1278	4417.21491	17.81488	7202.01612	459.24614	0.29044	0.03089	527.34731	0.45506
1279	4759.97139	8.18780	9986.53552	318.55405	-3.37486	0.00270	444.95764	0.07791
1280	3369.35067	20.17830	10493.36956	183.35841	3.00428	0.01222	184.59677	1.05981
1281	4849.44723	15.81925	8860.77909	361.51651	2.91538	0.02882	542.04380	0.26516
1282	4793.94158	10.33908	11103.35045	479.92100	1.43385	0.03063	628.74023	0.46532
1283	4501.55885	16.64554	8476.12754	582.27182	1.10171	0.04314	677.54954	0.42804
1284	5002.98239	7.77990	15195.13100	194.73409	-0.72766	0.00207	287.99439	0.07640
1285	3742.45880	11.76179	7588.43636	649.66199	2.72997	0.02462	580.97065	0.55744
1286	2909.67752	16.54448	14941.27873	416.85519	4.24284	0.19801	421.25556	0.74978
1287	3754.35625	12.24196	6491.91027	386.90860	-2.42450	0.01451	426.30995	0.39129
1288	3696.05209	14.23616	10445.64715	419.08896	-0.18254	0.05350	395.40849	0.64660
1289	4508.04040	22.69135	7687.30318	548.17003	5.50036	0.14245	619.57458	0.81885
1290	4611.55807	18.88540	7944.56135	427.42834	5.53980	0.03839	557.55277	0.25271
1291	4941.46534	13.05514	9396.10343	404.41801	2.24373	0.01031	613.16760	0.13852
1292	4875.62320	7.72457	9754.96779	404.00500	1.19049	0.00996	569.38347	0.23699
1293	3847.37366	24.38431	6297.70895	770.61069	4.33553	0.01590	742.33227	0.67930
1294	4401.78849	6.54150	8154.42588	344.93877	-3.15960	0.00280	460.91346	0.10638
1295	3754.68607	12.38271	6489.68393	364.36770	-1.56217	0.01414	395.86184	0.41548
1296	4686.83239	13.72602	9793.83429	425.68478	2.48254	0.01993	511.90758	0.22425
1297	3488.36010	13.82669	7417.48396	513.09579	2.01477	0.05801	465.70637	0.61915
1298	3766.65013	11.91399	9281.39032	640.61322	1.52972	0.02972	664.01831	0.48942
1299	4400.97537	15.44042	24602.00638	102.85718	-1.16664	0.00073	88.02366	0.28626
1300	4737.92857	21.69264	10151.03875	481.70832	3.64351	0.07474	604.95537	0.48835
1301	4642.09421	15.43264	10112.49711	294.82491	4.31342	0.09941	401.82571	0.43142
1302	4743.37643	14.76577	9395.05640	333.79384	2.24498	0.05999	453.39648	0.60880
1303	4675.17429	18.85720	12279.39075	593.39792	4.69798	0.04911	749.34556	0.35876
1304	3434.66308	8.14138	13754.59255	334.86034	1.81392	0.03294	325.09303	0.41304
1305	4975.99175	17.59486	8726.36331	706.01574	1.33704	0.02532	913.95788	0.30559
1306	4710.64889	15.80439	11092.87351	449.01354	3.82454	0.05784	599.89345	0.29981
1307	4497.10154	16.59088	8472.89162	585.11381	1.98907	0.04765	672.40478	0.35425
1308	4030.30996	9.52261	11970.35195	181.35837	-1.97312	0.00357	203.51092	0.21490
1309	4490.24217	21.05333	9254.33133	479.23312	3.07273	0.04202	619.80225	0.40691
1310	3769.52519	9.63445	8365.31789	532.32477	0.09135	0.05690	532.68307	0.57552
1311	3882.26255	23.96374	12173.64197	546.55608	7.28826	0.01907	581.75993	0.06364
1312	4984.14545	7.17492	14177.62906	130.95832	-1.03559	0.00147	165.02885	0.13533
1313	4173.66749	18.99951	8213.72743	692.78224	2.44909	0.03724	733.87978	0.45193
1314	4521.62185	20.90425	15177.34070	466.06766	4.72642	0.01585	532.48195	0.24514
1315	4885.89627	9.34357	12593.28301	270.18555	2.30289	0.02156	396.66287	0.21816
1316	4689.72459	15.36192	14142.83081	380.32854	4.08918	0.06226	531.53915	0.34860
1317	4240.71388	17.39404	7579.04717	749.02761	0.17014	0.02431	816.36017	0.45448
1318	3916.45460	18.54804	6907.61420	681.83185	6.04059	0.05696	607.71988	0.64191
1319	3099.73349	19.67243	10629.44294	514.92866	4.05877	0.13307	342.73220	1.24025
1320	4941.20748	13.04958	9534.98664	412.43789	0.39536	0.00974	612.18331	0.17804
1321	3695.00292	24.59241	6205.59287	561.01358	2.54149	0.03998	482.65636	0.48556
1322	4875.67314	7.72719	9862.17133	211.06256	0.54513	0.01159	247.57769	0.20213
1323	4416.89602	6.40589	7173.89884	371.05779	-3.74404	0.00232	487.82299	0.21083
1324	4178.52792	18.98172	8263.33521	524.61081	1.26815	0.03266	538.63837	0.56593
1325	3669.93388	14.10236	9927.34808	564.53705	2.16750	0.08072	592.59492	0.62021
1326	4848.76092	12.82315	13375.16991	393.11006	4.57278	0.02559	547.32806	0.20943
1327	3163.82961	16.83234	9587.04117	580.55651	3.30100	0.23146	485.93350	0.69801
1328	3193.39114	16.69991	7060.59176	337.06031	1.73141	0.10443	280.93782	0.63849
1329	5123.52379	10.51648	10010.18968	56.83268	-3.08960	0.00061	33.49831	0.65048
1330	4230.70519	18.86157	6823.52669	658.86239	2.38619	0.04485	708.07529	0.55602
1331	3120.99910	18.18280	10366.91609	372.82914	4.06464	0.17123	290.56411	0.78498
1332	3394.86480	9.51442	6809.40221	345.81258	1.10376	0.04899	297.79336	0.62246
1333	3248.94050	19.86571	13388.23587	412.35666	2.12141	0.18073	382.31632	0.90588
1334	4972.77051	8.58584	9173.68654	309.53277	-0.21749	0.00350	460.71065	0.10922
1335	4605.06465	20.65715	22457.67250	306.08568	4.23421	0.08011	371.38518	0.50275
1336	3534.03071	17.39256	7920.16670	410.99690	-0.13577	0.05820	423.31837	0.67874
1337	3919.62965	20.03872	9480.94997	809.12458	5.32079	0.05410	736.59852	0.61487
1338	4412.16761	22.70539	8316.37820	762.77101	3.62151	0.01576	957.39083	0.29577
1339	4419.84376	16.94872	10245.16541	458.71612	4.73365	0.06907	602.83073	0.57974
1340	4759.68794	8.16912	9964.29831	337.96913	-3.64807	0.00269	476.82591	0.07899
1341	4417.33811	22.64840	8518.11112	421.13438	4.50949	0.01531	544.66400	0.28795
1342	3627.70972	23.25887	5167.62496	408.95350	7.44590	0.07533	373.66222	0.49061
1343	4236.42795	23.41148	13328.57162	803.05261	2.79489	0.00926	919.63481	0.14886

1344	4782.46191	16.54184	9810.14549	623.95073	1.69869	0.04703	822.70215	0.30698
1345	3167.25602	15.81078	12080.51106	387.25279	3.80027	0.10989	305.54605	0.64571
1346	4285.38811	17.66844	7491.29203	735.66931	3.01647	0.04283	753.54961	0.46389
1347	3187.91274	16.75368	7005.59778	304.73346	2.10633	0.07742	194.42648	0.65685
1348	4895.22683	12.78922	7268.15625	359.01348	3.72174	0.04077	475.45298	0.31361
1349	4645.51653	22.38066	9581.09650	653.31358	2.67341	0.04108	835.07756	0.42537
1350	5024.44598	18.27868	9249.44453	294.68714	3.08818	0.01739	418.97144	0.25266
1351	4166.59470	23.75348	8341.80949	873.14902	3.22237	0.06570	890.01047	0.57051
1352	4365.04801	20.37189	9911.44457	534.83870	3.18513	0.05042	592.83119	0.36304
1353	4843.79252	12.54948	13044.99876	378.35037	2.18716	0.02274	527.61079	0.32586
1354	4642.84030	20.11078	8001.88989	390.86436	3.91449	0.04343	540.40211	0.33236
1355	4945.31894	13.14801	9381.96186	426.25476	2.81308	0.01015	640.95261	0.20047
1356	4299.62119	15.22556	12130.38087	401.66493	-1.15125	0.01855	439.78984	0.30777
1357	4497.36242	21.26915	8786.95397	509.70313	5.39293	0.08454	573.46116	0.61906
1358	3536.65563	17.41382	7997.12107	398.48063	0.00819	0.05707	391.16805	0.59587
1359	3272.42681	18.13350	9899.49734	355.12195	1.74639	0.12894	250.24733	0.87046
1360	4339.68394	18.32475	6906.67014	529.56701	4.87500	0.03769	523.66618	0.45337
1361	3522.58145	17.29709	7913.88103	457.03989	1.66120	0.06670	463.96295	0.59524
1362	5113.05792	10.96329	14444.98557	123.31950	-0.71395	0.00230	159.06021	0.16188
1363	4746.46478	21.54262	19490.65655	427.58719	4.30366	0.03394	537.33463	0.37038
1364	3631.77561	18.23182	19717.55395	278.83371	0.28596	0.05965	192.78958	0.77590
1365	4794.53792	10.36407	11104.81859	452.80216	1.00833	0.03258	576.75853	0.42716
1366	4941.64965	13.05839	9344.67094	348.35054	2.38865	0.00936	518.61017	0.18558
1367	3380.20381	9.60403	6929.84497	424.22326	3.12243	0.07110	391.19498	0.46348
1368	3072.82024	19.48798	10712.61077	634.20340	3.66492	0.12691	508.41973	1.10520
1369	3836.78372	23.93399	7114.68219	743.38848	7.11572	0.07357	743.20579	0.33165
1370	5044.70932	13.48441	8869.37646	290.64152	0.52393	0.01375	423.48568	0.20763
1371	4319.18352	18.30501	7718.93852	290.58091	6.55503	0.11095	286.46559	0.44278
1372	3708.59358	24.59489	6218.56807	726.12908	3.23092	0.05033	683.09698	0.47454
1373	4579.31391	18.00037	8257.44518	507.25497	1.93409	0.02630	679.86048	0.31979
1374	4573.55225	7.61595	8644.57815	255.66336	-0.45543	0.00480	343.50253	0.15206
1375	4401.67695	6.53800	8153.35454	367.68667	-3.06360	0.00274	486.77295	0.14944
1376	3680.55397	7.68077	5915.74231	421.72924	-0.32047	0.02735	447.65633	0.51969
1377	4367.72077	18.87687	9569.18609	503.11968	3.52772	0.04553	555.28399	0.39812
1378	4961.27159	9.87320	8402.58496	188.80617	1.13134	0.00427	260.52655	0.19091
1379	4694.76959	18.36860	16652.95559	381.23379	3.77715	0.02883	511.87353	0.14848
1380	4763.03893	21.57406	20163.49815	558.47789	2.74133	0.03495	732.30533	0.33663
1381	3868.56097	24.38704	6315.10534	749.86630	3.58489	0.01928	693.39842	0.73029
1382	3461.42983	24.00161	11424.31030	1053.56281	10.05844	0.17268	748.50199	1.86319
1383	4411.67462	17.87259	7007.56266	675.25647	2.55856	0.03943	736.77512	0.42076
1384	4958.11112	6.63813	10779.74262	383.12939	-2.93792	0.00585	540.21400	0.17957
1385	4575.46082	7.68697	8873.26358	273.07472	-2.96625	0.00359	374.12241	0.09010
1386	3832.97889	15.80095	8642.46188	802.43880	2.17394	0.03388	810.11265	0.54239
1387	5009.17303	10.09460	9283.79340	327.83692	2.25471	0.00596	481.71637	0.11170
1388	4846.90350	13.31333	10869.43325	321.81344	1.81739	0.02324	480.59912	0.29039
1389	2885.53169	16.55351	14135.79160	521.38986	4.21000	0.23456	425.26165	0.76394
1390	4448.85405	20.39291	11002.50524	598.39862	3.89010	0.01715	731.92891	0.25762
1391	4520.74041	19.91542	7345.44281	611.94753	2.57025	0.04920	725.72903	0.44260
1392	4688.28896	21.35693	17826.57114	329.19892	3.79073	0.07021	381.85385	0.60943
1393	4266.64057	16.21851	7787.23397	702.09970	1.53948	0.04299	751.07476	0.50581
1394	5026.48592	18.33424	9217.68954	484.53364	2.36393	0.01896	703.21640	0.17968
1395	3860.50254	24.00329	12291.85357	814.08219	5.61957	0.01713	810.17992	0.07039
1396	4080.01278	21.85475	8920.79393	757.49823	1.93789	0.02899	803.17910	0.50244
1397	4141.16264	12.32437	12979.92252	129.65570	-1.92775	0.00119	146.06558	0.58262
1398	2881.72076	15.57720	15385.21250	495.81821	4.06054	0.21771	453.59098	0.83517
1399	3700.89195	24.57694	6198.10494	547.83416	2.52980	0.02923	483.25665	0.47434
1400	4612.54699	18.88458	7921.04058	429.78214	5.73415	0.03873	557.69578	0.25700
1401	3833.74465	20.20671	6292.20249	807.70127	2.89736	0.02881	814.98815	0.35315
1402	5023.95666	18.26631	10070.51482	345.00058	2.42977	0.01791	501.73361	0.24990
1403	4874.68276	16.84879	8568.50961	424.44132	2.79712	0.05699	564.18502	0.41320
1404	4817.40355	20.81989	7812.78387	561.28155	5.75075	0.06422	697.34807	0.38927
1405	3522.16006	16.76762	17013.36405	344.18456	1.61625	0.15658	233.76904	0.81314
1406	4766.25395	8.12226	9257.81808	364.42063	-1.48759	0.00387	525.36548	0.09690
1407	4480.43466	21.04122	9260.80455	552.97176	3.48555	0.04611	707.97605	0.28254
1408	2853.13789	16.50484	13685.60127	341.43578	4.54176	0.23134	232.26619	0.61775
1409	4247.69355	23.31599	12213.42556	643.66049	5.90020	0.01295	765.59950	0.12732
1410	4681.90464	7.54431	17457.10446	113.40149	-3.55791	0.00006	134.21976	0.17226
1411	3163.45756	16.89188	9587.28203	624.84802	3.11039	0.23040	574.22386	0.63108
1412	4607.41416	18.93331	8435.95988	489.37982	3.92720	0.03803	640.40365	0.31977
1413	4145.82595	16.45961	8950.22111	505.96965	-0.53925	0.01889	531.11693	0.40110
1414	4246.29407	19.01472	7265.61666	577.86685	3.43732	0.04367	621.41479	0.46156

1415	3433.18846	24.09847	11343.31812	1216.12966	10.48315	0.16671	890.27713	2.00111
1416	3311.99133	20.85134	14308.43319	416.69768	1.90281	0.18454	348.72847	1.08503
1417	4549.46856	16.02757	11318.92902	325.15765	4.89507	0.06532	445.42065	0.37917
1418	4265.04578	23.22787	13454.80925	626.54190	3.89101	0.01014	809.07315	0.12411
1419	2491.36926	14.38761	3645.23614	488.29973	5.88425	0.32164	571.18169	0.19210
1420	4824.97842	20.85715	7792.30688	497.80744	3.83409	0.04768	599.31537	0.42273
1421	3343.54741	24.31093	11634.98640	527.47605	3.24961	0.06766	460.25471	0.49022
1422	4525.76996	20.95360	15224.77959	629.23549	3.79515	0.01302	769.79095	0.26128
1423	4911.70813	13.70301	8926.54185	533.73585	2.00520	0.01676	775.48726	0.22287
1424	4291.77721	18.10723	6914.77057	664.23876	1.53881	0.04874	737.45087	0.53432
1425	3319.69992	17.60203	7377.95650	254.79798	0.65091	0.08123	116.53339	0.78464
1426	3179.43574	16.39025	9700.14479	487.23357	2.77813	0.20918	425.95018	0.63279
1427	4335.49381	17.19507	8161.01653	455.85195	3.24762	0.04411	465.93425	0.42873
1428	3347.81987	7.16059	13183.85818	278.29550	0.56334	0.03192	229.95366	0.55148
1429	3679.52076	7.68935	5913.66614	402.39823	-1.09475	0.02382	425.64185	0.52754
1430	4286.24675	17.68946	7491.34696	726.27833	3.28874	0.03993	754.73134	0.50574
1431	3558.01581	17.62367	7344.61164	426.60396	0.77267	0.11616	363.44722	0.87421
1432	4430.78077	20.12111	8109.72288	509.56190	7.78530	0.13279	579.38760	0.60541
1433	3859.02946	23.98325	12334.75448	911.55396	6.29071	0.02057	906.99940	0.06982
1434	4034.87309	9.21995	11234.11567	289.90704	-0.85563	0.00897	380.93340	0.13945
1435	4553.19982	17.77375	8432.68406	384.10579	2.00729	0.02653	490.62844	0.30035
1436	4635.54283	15.38993	10157.19133	454.86931	3.85390	0.10172	636.25677	0.44250
1437	4753.47373	18.43824	8340.12833	47.50234	1.61419	0.00125	16.56405	1.28934
1438	4334.46790	17.14112	8151.72245	531.71614	3.02250	0.05167	566.67821	0.30255
1439	4091.81190	18.99242	6774.62536	639.52027	2.27786	0.06204	662.17480	0.63516
1440	3473.94116	13.91061	7295.21412	470.12444	1.59828	0.06235	430.34565	0.56941
1441	3776.56527	9.57115	8280.14010	390.06247	-0.99056	0.04376	345.08598	0.63087
1442	3476.64982	13.90095	7326.48291	522.43763	1.69162	0.05717	480.16970	0.59737
1443	4874.25129	7.70532	9709.74891	491.14782	0.03796	0.00890	680.98613	0.24394
1444	3248.26236	19.84440	13384.49203	404.76690	1.95130	0.18026	346.71479	0.91082
1445	4414.06050	15.04291	24053.82012	67.27225	-3.31437	0.00061	38.26179	0.25968
1446	2484.95259	15.49398	3609.84546	385.83148	5.51394	0.35600	415.59538	0.86462
1447	4244.29774	19.12531	7251.48685	464.37100	4.71100	0.04959	447.79215	0.50891
1448	4329.47368	15.92745	9219.46159	428.18368	5.75510	0.11633	582.22371	0.43828
1449	4469.85306	22.84842	7116.04967	550.73143	4.81197	0.14528	648.82376	0.58385
1450	3736.24526	11.52144	8791.92859	595.46036	-0.82596	0.03263	588.90949	0.61480
1451	4146.48181	16.46023	8894.15812	716.94804	1.23406	0.02486	775.00217	0.41652
1452	4004.72720	9.90549	9364.24602	368.81339	-1.74034	0.00879	471.79197	0.18205
1453	5062.87472	13.65468	10278.62228	45.90563	-3.24376	0.00022	27.97171	1.09861
1454	3620.47359	23.22329	5159.36293	374.17704	7.70284	0.08319	306.94476	0.46059
1455	2603.59767	26.23090	11615.60130	674.51451	8.00654	0.17967	396.07782	1.34529
1456	4410.79878	17.82420	7148.98126	582.57584	2.25735	0.05501	690.90145	0.35700
1457	4670.90659	16.61865	18057.73818	356.99725	3.81774	0.08783	487.36620	0.45968
1458	4873.74882	7.69559	9885.11629	386.76666	-0.26042	0.00869	535.24128	0.24510
1459	4982.58240	17.70067	8855.62163	488.39349	2.12168	0.02160	643.39510	0.31180
1460	4850.96535	13.64238	11976.88689	566.18027	1.80473	0.03756	723.96836	0.45436
1461	4975.79293	10.29984	9098.40644	232.54889	1.90256	0.00437	341.67009	0.16400
1462	3138.26215	15.60612	6736.56415	274.11835	1.52858	0.01749	261.36918	0.18487
1463	3137.22071	18.27259	10283.77346	485.58647	3.12454	0.18819	437.90690	0.79123
1464	4253.72913	18.97467	7162.08394	830.60033	2.50513	0.04071	922.66738	0.45717
1465	4281.52072	14.16447	6882.47017	481.84289	-2.52452	0.02001	544.29229	0.46809
1466	3546.97750	16.83663	17548.67774	413.71308	1.26988	0.15219	348.82940	0.70008
1467	3284.42074	18.13358	9890.38411	314.53472	2.16182	0.12840	208.34221	0.86144
1468	4467.88342	20.38062	13560.33888	359.79325	6.34221	0.07752	407.38820	0.37469
1469	4292.60682	18.15432	6923.91052	632.71638	1.05975	0.04799	714.50048	0.53199
1470	4950.88890	10.71231	10155.84003	124.05317	1.14408	0.00304	148.26735	0.29824
1471	4572.22388	17.92276	8310.30378	355.01199	3.24012	0.02771	445.67813	0.30936
1472	4254.54223	18.99866	7157.55228	848.68713	3.56331	0.05314	920.55782	0.39288
1473	4680.87772	10.66571	16611.73466	76.35578	1.91914	0.00789	45.65108	0.47071
1474	5003.30510	7.79051	13081.30416	172.48151	0.16005	0.00222	239.39524	0.05158
1475	3710.59351	24.60547	6228.83351	652.35772	2.78503	0.04164	595.95258	0.47196
1476	2977.13483	16.92898	15629.63499	378.73863	3.43380	0.14356	375.33439	0.85676
1477	4310.73096	18.14009	7633.30381	386.33681	6.64579	0.11246	431.97215	0.41535
1478	4069.97501	25.69846	8974.27354	672.94523	2.58606	0.01116	676.97846	0.43969
1479	4289.04621	17.64488	7512.83349	707.45060	2.72550	0.04329	744.56799	0.44148
1480	4784.00295	22.28142	10648.41353	561.54148	3.06306	0.04769	710.54695	0.49660
1481	4191.79984	13.02829	12507.33413	66.42674	-2.43024	0.00408	43.78880	1.09665
1482	3369.97814	7.50138	13519.26663	357.44283	0.76223	0.03046	307.91053	0.55158
1483	4381.24679	18.86779	8610.93020	589.51341	1.43231	0.03716	655.85607	0.39796
1484	4281.49738	14.23468	6829.80607	602.52597	-0.62302	0.02527	714.86793	0.40294
1485	4737.74243	15.91462	12173.59183	344.47013	2.78598	0.04721	470.42150	0.42868

1486	4975.02211	10.27415	9090.83027	273.26045	0.61858	0.00434	407.46323	0.16189
1487	4468.15861	20.37275	13704.81449	375.14467	6.36726	0.10711	430.99624	0.48376
1488	4528.53306	20.10826	21600.28925	430.71482	5.69225	0.11865	564.59986	0.35174
1489	4970.08039	17.26641	7951.58082	604.51060	-0.57922	0.01860	803.14865	0.29224
1490	4969.70509	10.92185	10229.11481	89.02269	1.34258	0.00278	77.98262	0.30343
1491	3489.76695	13.81283	7416.70594	418.58149	0.91532	0.05122	352.50403	0.72250
1492	5030.36194	18.28327	10322.21442	227.36997	1.96482	0.01411	300.23268	0.26006
1493	5028.06587	18.36848	9233.56735	377.45570	3.65702	0.01906	534.89083	0.18532
1494	4851.23771	13.64480	11909.05376	615.53404	1.28003	0.04035	795.00825	0.48625
1495	4561.12254	10.45436	15434.90913	76.38290	-0.10188	0.00166	66.30476	1.24944
1496	4674.90980	18.89414	12411.77800	659.08402	5.27602	0.04559	824.34568	0.38489
1497	3293.66996	17.27086	7429.99252	339.14985	0.09058	0.08568	225.10461	0.78263
1498	4815.94344	20.79762	7760.97603	470.76683	4.15159	0.05221	556.69858	0.43048
1499	4705.98651	11.09111	15918.30892	107.74992	2.34520	0.00492	126.83442	0.22985
1500	4973.83135	8.61303	8948.76408	272.72011	3.60368	0.00419	398.27107	0.10482
1501	4617.08180	21.71054	15581.33576	402.32201	4.09927	0.06420	455.30041	0.53275
1502	4652.55057	22.41530	9645.86473	720.36598	2.17485	0.03315	915.59218	0.41687
1503	4744.92590	21.84805	10227.08531	492.79638	2.92694	0.05839	635.27352	0.41641
1504	2552.14780	15.50962	4082.38393	489.51920	5.57944	0.24435	521.94167	0.76295
1505	4847.41737	13.60622	12182.79279	451.16137	1.66388	0.03409	574.21561	0.46445
1506	4135.78772	12.97756	12552.85902	263.45932	-0.67996	0.00780	335.93147	0.16485
1507	4774.25126	10.20078	11812.35535	516.77540	-1.55063	0.00779	696.48545	0.11983
1508	4300.17402	15.21312	12130.18749	501.86430	-0.64168	0.01783	624.78624	0.30312
1509	2455.77087	13.53697	3914.46186	454.21604	6.12708	0.25398	527.60688	0.41426
1510	3312.18993	14.66146	11481.25437	332.92694	2.87508	0.08157	304.02199	0.54167
1511	3308.47776	14.61365	11508.54753	353.12053	1.86419	0.05898	333.77885	0.62292
1512	3312.73267	14.61095	11484.09871	332.23328	1.51406	0.05797	310.33537	0.59299
1513	4299.03442	15.20975	12142.99664	539.65265	-0.86610	0.01953	665.78397	0.32332
1514	4711.11944	15.82476	11390.07644	464.18234	2.94286	0.05680	614.85553	0.36857
1515	4301.50000	32.88361	1204.18848	29.10048	4.29430	0.01663	0.51243	0.91943
1516	5002.98629	7.78259	13758.60728	163.02274	-1.11706	0.00201	228.44653	0.06961
1517	4406.55197	17.86633	14059.21678	59.00659	1.98650	0.00940	19.94872	1.18736
1518	3502.20647	15.33834	11514.04015	442.99209	1.95443	0.09221	398.29686	0.54914
1519	4240.48108	17.40044	7588.85991	764.44455	1.44162	0.02957	853.88016	0.31580
1520	5012.25304	9.99514	9149.62026	316.37006	1.50359	0.00457	470.28435	0.14445
1521	3610.48369	13.24044	20545.39158	310.98319	1.07771	0.01301	406.02552	0.26860
1522	4710.52747	15.80926	11376.42691	378.33630	4.94467	0.05183	500.33524	0.35367
1523	4670.17154	18.83134	12319.77886	501.47485	3.04330	0.03831	645.67976	0.37440
1524	4048.01827	9.09623	11671.67548	248.06195	-1.00955	0.00581	332.08974	0.12021
1525	3724.29136	24.54207	6202.00813	463.30811	2.44498	0.03943	349.14510	0.48334
1526	4887.04494	9.35133	12684.07957	415.40937	1.80849	0.01950	619.35990	0.23069
1527	3407.08046	19.12770	19799.46128	404.91795	0.91312	0.10866	333.05815	0.93367
1528	4672.82579	18.85033	12373.80828	600.40526	4.15349	0.04218	753.32995	0.37502
1529	2928.66498	20.18881	8113.07360	426.38040	4.53331	0.28982	251.85071	1.06127
1530	2982.29907	17.03772	15814.54178	363.38377	4.46594	0.21196	347.27928	0.83006
1531	4089.21653	18.95100	6753.86566	642.99851	3.50721	0.06329	620.71673	0.61769
1532	4265.68098	16.21262	7766.43315	657.86664	1.10281	0.05023	690.15975	0.46386
1533	4663.03055	19.56603	12856.20148	342.61688	5.50275	0.08510	467.29188	0.48431
1534	4492.94832	12.54518	9304.80454	641.86317	0.40489	0.02867	753.56019	0.25355
1535	4544.58769	20.94952	12082.63671	668.66437	3.23242	0.01107	812.89453	0.24920
1536	4131.10398	12.88227	12554.48427	310.08568	-1.08396	0.00773	409.61044	0.15742
1537	3500.74391	9.29543	7978.87831	461.04149	1.16442	0.03941	380.24627	0.49218
1538	4423.41464	11.47776	8369.59231	549.43815	-0.40363	0.01274	681.39769	0.17317
1539	4761.47633	14.79940	11449.10485	444.06474	3.80821	0.01933	653.20309	0.35972
1540	4844.01885	8.84088	9383.17919	110.71396	0.21421	0.00381	103.49763	0.60378
1541	5003.44129	7.79658	13083.05400	208.07369	0.08949	0.00225	310.71245	0.05440
1542	3909.37561	12.91523	12022.24086	531.60987	1.02317	0.03895	600.23779	0.43672
1543	2940.62544	26.37217	12657.25434	557.93545	5.78917	0.11435	293.34177	1.64315
1544	4628.48395	22.28256	9821.40921	672.27991	2.96413	0.03951	843.85557	0.41679
1545	4325.78123	21.87442	8628.83221	666.69070	2.08037	0.03576	703.80522	0.53446
1546	4826.96385	20.87062	7831.53757	628.46691	3.13514	0.06058	767.94113	0.39487
1547	4416.26247	17.86621	7173.78402	640.96295	1.78449	0.04153	753.22701	0.40854
1548	3338.23681	7.02082	13043.53396	348.52146	0.48630	0.03293	317.91375	0.57384
1549	4507.35986	21.14458	9954.99539	387.63157	5.77989	0.07499	436.26320	0.54925
1550	4343.01589	21.90275	8685.15501	718.93181	2.66875	0.04072	779.51788	0.53392
1551	4874.02771	9.78819	6939.52905	95.68516	1.27744	0.00480	86.70233	0.25749
1552	4878.84339	7.75633	10062.33960	389.89185	-0.50410	0.00807	518.28912	0.26366
1553	3379.06974	9.67314	6888.48706	389.63178	2.12217	0.05887	421.28259	0.42317
1554	4763.21571	21.58150	20164.41983	361.03519	5.19253	0.03356	442.79839	0.33566
1555	4460.82588	21.79523	7625.61030	455.96133	4.31817	0.03770	568.92611	0.26708
1556	2485.75811	14.98853	3012.45903	350.90475	5.25496	0.37394	455.67586	1.19627

1557	4426.31284	17.36618	10694.63291	587.24977	2.13752	0.02908	657.29931	0.40966
1558	4699.50966	11.05587	15847.90780	173.21095	5.48464	0.00530	237.39329	0.21674
1559	4248.14702	19.11453	7268.59431	381.12642	3.88338	0.04848	378.54714	0.50566
1560	2445.07496	13.62068	3744.29888	428.68159	6.29802	0.23378	386.32378	0.34230
1561	4779.21950	10.40676	11697.42402	394.05493	-1.21561	0.01279	515.64278	0.17187
1562	4712.29522	15.85098	11392.03205	565.88042	4.07037	0.05679	745.69794	0.39253
1563	4894.36785	9.47690	10020.44706	559.60986	-0.51994	0.02368	725.46184	0.40221
1564	4607.09812	22.30897	8626.69394	692.97283	2.88107	0.05277	839.09057	0.35618
1565	3573.84424	17.67749	7376.45074	453.98290	0.44395	0.09802	430.07813	0.82184
1566	4875.93308	16.85498	8561.78030	460.81981	3.29470	0.06486	597.60890	0.32560
1567	4886.82207	9.34766	12596.68938	425.23443	2.62976	0.01874	636.19881	0.23237
1568	4750.01308	21.54875	19547.93769	541.85244	3.25667	0.03547	692.69676	0.37471
1569	4759.71490	18.20787	10682.11526	628.94833	2.18594	0.03362	805.01932	0.37328
1570	4576.18474	22.50516	12960.22201	616.87255	4.92324	0.03180	756.61358	0.33700
1571	3372.40417	20.16580	10747.82146	247.64700	4.18362	0.01916	290.39851	1.01146
1572	4855.02232	13.72791	11584.20900	492.00660	2.18731	0.04458	630.68299	0.51311
1573	3385.92683	17.91582	19251.09886	332.99310	0.89633	0.08940	202.82218	0.80945
1574	3538.18439	9.34512	7262.28855	580.06521	2.50188	0.04296	513.79382	0.70744
1575	2936.72163	24.88752	7049.26589	572.01259	6.16259	0.15670	374.31604	0.99164
1576	3788.54498	24.17291	11034.02345	715.79592	2.78607	0.03785	673.95132	0.74295
1577	4636.71561	16.96969	10101.66167	406.96787	4.50821	0.06167	561.54978	0.53014
1578	2447.00987	13.65558	3892.86648	436.57632	5.53343	0.26909	488.97281	0.42702
1579	4795.03341	10.39269	11107.56141	565.85517	1.77917	0.03715	714.04387	0.42150
1580	4431.92747	20.17550	8121.82178	531.55001	4.80647	0.12869	601.31120	0.59064
1581	3539.68308	17.33254	8061.68162	393.68692	-1.53184	0.04262	382.70324	0.61163
1582	2916.71952	25.05343	6983.37450	629.90800	6.72073	0.16518	390.00026	0.91618
1583	4708.19309	11.05765	15924.12232	102.46587	1.84091	0.00466	87.91938	0.23439
1584	4195.17434	23.77889	8461.08469	682.41159	2.07564	0.05300	749.92696	0.58156
1585	4374.64310	20.36701	9971.76819	613.50143	2.10315	0.03732	702.53717	0.43969
1586	4515.31317	21.22906	10047.89743	372.31146	6.57737	0.05869	443.80647	0.54333
1587	2575.62565	15.09387	10784.52786	471.02984	5.96516	0.28013	452.71372	0.59682
1588	4969.86296	10.96003	10238.50218	97.34304	0.10034	0.00321	95.88347	0.26224
1589	5113.44361	10.97978	14444.93681	128.95390	-0.46455	0.00212	162.98487	0.17478
1590	4475.36962	21.01616	9267.23124	559.67782	2.69190	0.04464	753.61228	0.39127
1591	3848.26068	23.86251	7188.85540	736.99141	5.83829	0.06168	742.96227	0.44289
1592	4374.53987	20.37660	9977.48934	699.65478	2.59660	0.04097	795.18558	0.42909
1593	4921.16194	10.87553	8928.55332	133.14154	1.27447	0.00476	161.59650	0.14712
1594	4972.72536	8.58230	9519.30836	238.46608	0.30534	0.00323	343.42517	0.11867
1595	4835.56837	15.61322	8499.40466	295.34879	2.64753	0.02278	418.89744	0.38023
1596	4428.40305	14.87427	25780.48192	89.21617	-3.33328	0.00032	64.25213	0.77837
1597	4151.48041	15.68057	12897.33413	100.04107	1.16868	0.00264	83.58150	0.92461
1598	4851.74853	13.66843	11910.92716	524.16824	2.28198	0.04020	667.33141	0.46781
1599	3833.45118	15.80862	8641.27693	648.68937	2.40864	0.03378	626.49618	0.55216
1600	4344.04118	21.90717	8685.04367	752.13542	2.43709	0.04148	847.34699	0.53697
1601	4644.75983	20.77243	9182.35156	474.77261	4.28132	0.06979	567.49971	0.49376
1602	4279.59220	18.47603	16078.06082	67.84165	1.66144	0.00929	25.14022	0.83072
1603	4974.87570	10.32681	8717.24739	229.20396	3.73422	0.00486	326.41270	0.13151
1604	4552.40094	17.75378	8382.99605	528.35899	1.41300	0.02596	694.61660	0.29931
1605	3577.37285	13.31242	5259.45967	551.03558	1.95338	0.04018	513.20130	0.72478
1606	4246.35953	19.01120	7266.88988	531.81191	3.29707	0.04222	571.76124	0.46718
1607	3374.57921	7.57301	13658.33968	310.68746	0.88363	0.03136	258.53230	0.50402
1608	3934.42299	20.07454	9090.23568	752.39101	6.09929	0.06010	677.82255	0.72341
1609	4342.23168	18.76506	7866.58464	422.14446	6.37003	0.11560	506.17791	0.40377
1610	4553.56384	20.49877	17586.79203	333.58017	5.68804	0.09687	384.11524	0.40559
1611	4011.65364	9.38128	9048.39856	388.84414	-1.69988	0.00696	492.72201	0.23667
1612	3914.84003	12.93147	12079.00716	433.20975	0.43707	0.03490	504.05161	0.45521
1613	4670.49939	20.15026	7780.45529	405.85470	5.05177	0.04742	581.36086	0.25102
1614	4926.78005	7.60989	9219.94998	330.06071	-1.91817	0.00037	498.11310	0.02991
1615	4756.82971	21.59024	20099.18296	441.32569	4.64646	0.03237	567.23999	0.34576
1616	2572.27506	15.50573	10954.91782	531.42486	5.31669	0.31051	543.71305	0.10167
1617	4886.39427	9.35646	12585.73226	391.35348	3.68089	0.02179	588.06828	0.22150
1618	4690.23131	13.50302	9639.73515	382.29948	2.01809	0.02015	452.58850	0.23150
1619	2514.18914	26.21338	11091.58539	630.39598	8.21869	0.19571	392.88594	1.37072
1620	3515.94710	9.35814	8279.13634	396.33493	-1.07711	0.02904	315.84001	0.46564
1621	4893.91902	9.46081	10019.78795	483.41836	0.01088	0.02485	640.56579	0.41666
1622	4844.35929	12.71640	15148.49337	309.72792	3.78962	0.02546	430.72326	0.30615
1623	3669.24691	14.10435	9943.16832	313.66226	0.05838	0.06643	282.06224	0.55676
1624	5019.42331	13.76207	8483.89455	356.76352	2.17419	0.01649	533.10564	0.16460
1625	4488.23009	22.91123	7126.25931	465.43155	5.83900	0.15305	501.84214	0.65693
1626	3488.02779	13.81312	7414.16642	483.36822	0.69263	0.05382	429.91465	0.71052
1627	4516.14011	21.19830	10049.46113	577.86568	4.21833	0.08762	712.96464	0.52241

1628	3671.30244	14.09904	9992.48174	406.49321	1.37953	0.06944	367.24529	0.64464
1629	3272.74276	18.36192	10250.80802	374.46432	3.30260	0.18102	301.22388	0.85348
1630	4497.51812	20.75918	11644.35239	627.32799	5.56212	0.01916	766.38398	0.31579
1631	5009.26276	10.09771	9273.11767	324.28187	1.37502	0.00526	480.36821	0.14710
1632	3647.24134	23.93637	10479.26166	1036.60935	6.50328	0.05538	897.37308	1.13805
1633	2575.54303	15.01494	10812.85332	477.15652	5.68044	0.28115	511.39583	0.49912
1634	3515.80189	9.34733	8247.85962	409.63601	-1.08702	0.02885	352.23286	0.51764
1635	3218.80261	16.52423	12214.76214	345.94757	2.19101	0.07997	255.39943	0.74695
1636	3253.20956	18.34139	18130.39492	408.06551	2.19989	0.18723	331.97025	0.85173
1637	2903.46749	16.25065	14864.92234	442.12358	4.97583	0.20474	417.37962	0.59725
1638	3211.87736	14.53262	9955.99520	479.41093	2.93860	0.09757	512.74349	0.43635
1639	4186.32943	12.27874	12572.16379	221.35242	-1.51742	0.00449	270.92429	0.21522
1640	4606.25370	22.29726	8629.08045	669.31425	2.49641	0.04248	820.05139	0.38015
1641	2458.31112	13.49732	3931.78473	479.37090	5.49717	0.25330	530.96378	0.42083
1642	5094.25834	9.69782	14243.71293	131.44529	-0.81709	0.00220	161.94819	0.29893
1643	4877.53009	16.84869	8592.52988	374.98563	3.79373	0.05681	475.13690	0.41260
1644	4395.49970	22.61977	8475.16296	536.74068	5.14217	0.01878	711.41811	0.27744
1645	3633.02365	12.60831	22262.27423	246.08711	0.24877	0.02331	257.41734	0.45305
1646	4899.19158	13.49774	8173.82629	499.35114	0.82540	0.01672	720.26387	0.22677
1647	4748.81380	15.99530	20803.91931	301.67089	3.32581	0.05275	394.88022	0.63742
1648	4736.47468	21.75097	10160.86034	306.77815	5.12759	0.06312	357.74116	0.48564
1649	4898.51469	12.86314	7391.43609	390.42787	4.44038	0.03990	523.41323	0.29665
1650	4967.68454	9.86770	8854.69804	396.57684	1.22649	0.00736	571.41699	0.16479
1651	3176.66740	15.89308	12197.62604	251.91955	2.92726	0.10017	186.34217	0.74673
1652	2961.40105	24.95603	7110.50241	677.72707	6.67546	0.17293	469.56849	0.79235
1653	4805.89458	22.31211	11473.17783	788.06455	3.19780	0.01495	989.96543	0.26912
1654	5112.98043	10.96182	14094.52849	125.94419	-0.01192	0.00252	164.30485	0.15912
1655	4282.18862	14.24162	6828.40785	580.75734	-0.42827	0.02276	694.41386	0.44742
1656	3852.70828	24.43450	6284.13181	852.94025	3.28693	0.01583	818.69697	0.82916
1657	4910.09639	13.61046	8086.52222	518.13137	2.18067	0.01669	749.30265	0.20512
1658	4894.07138	9.47502	10147.84371	555.37520	1.27691	0.03201	700.83985	0.38050
1659	3916.22427	12.97754	12086.58108	385.73620	0.31580	0.02953	403.56087	0.44566
1660	4837.03255	14.49784	10645.11014	362.94895	2.63301	0.03024	547.82619	0.23780
1661	4461.89995	21.71918	7678.23518	559.42979	3.38594	0.02987	702.11498	0.35223
1662	4790.13972	10.24361	11153.39444	569.44175	0.60137	0.02631	728.28051	0.39030
1663	5078.82921	9.56044	14405.49747	139.95337	-1.49978	0.00242	179.00142	0.35300
1664	3686.28326	7.71719	5947.40833	353.76875	-1.61600	0.02679	340.56816	0.48363
1665	4545.31362	20.95424	12090.12872	583.59584	3.30012	0.01124	703.80188	0.25156
1666	3903.35683	24.72044	10046.06097	873.86030	5.36205	0.01353	920.68497	0.35729
1667	4467.07418	20.36889	13556.47237	491.19233	4.35719	0.07514	612.43220	0.35706
1668	4894.47562	12.77548	7472.17633	359.86268	3.13613	0.03826	478.94901	0.31648
1669	4080.64265	21.81675	8937.65450	758.98269	2.88842	0.02941	755.23115	0.55158
1670	4432.42578	14.70387	6178.34622	446.74196	2.93381	0.02542	478.52112	0.33856
1671	5020.58183	13.81003	8331.50782	366.25048	2.44423	0.01803	543.23512	0.16981
1672	4327.40167	15.80038	9150.90232	386.39032	6.71691	0.11995	507.11688	0.43603
1673	4981.14257	17.70215	8860.87313	711.47039	1.62826	0.02289	918.63234	0.31447
1674	4783.10928	16.52618	9811.12122	421.98151	0.18599	0.02877	552.76149	0.37276
1675	3656.84121	23.86796	10511.54112	1080.49398	8.68777	0.07401	885.40995	0.85255
1676	4082.80182	20.23421	14834.80465	94.14184	2.05130	0.01142	54.99718	0.57780
1677	3192.06738	16.67805	7058.22068	315.01898	1.61595	0.09748	206.99530	0.61295
1678	4852.66774	13.68082	11914.80145	384.81267	2.20837	0.03752	484.87292	0.43024
1679	3646.12438	23.90996	10464.24895	1120.88514	6.34680	0.04395	805.68409	1.14313
1680	3838.61369	23.84714	12118.44395	638.48820	6.99104	0.01915	590.04828	0.05662
1681	4784.09637	15.48433	7296.05246	531.73938	3.56698	0.01390	763.14955	0.21767
1682	3766.51965	11.90530	9272.64589	678.21703	1.53955	0.03058	694.46926	0.64065
1683	4875.69731	7.72509	9865.82901	408.65739	0.39629	0.01070	570.82453	0.20245
1684	4966.61386	9.96405	8576.57658	285.73111	-0.52930	0.00452	425.94473	0.18880
1685	2566.34233	15.80643	11130.24558	359.68945	5.37802	0.31440	345.30250	0.44251
1686	4059.28518	9.21830	11966.27848	192.09418	-1.22142	0.00323	222.47034	0.19861
1687	4451.74912	19.78040	7938.61843	519.15110	5.17251	0.07911	617.06595	0.58082
1688	4900.35191	9.88079	7852.85017	164.48262	1.05275	0.00492	215.59215	0.23499
1689	3526.89388	25.29850	9161.84875	80.73055	4.28748	0.00928	30.96616	1.51040
1690	5003.21062	7.78790	15193.48554	235.55966	0.67771	0.00217	352.23002	0.05560
1691	3274.98298	18.55903	18660.46782	424.72187	2.07146	0.20472	341.84134	0.96602
1692	4235.99123	23.37980	13381.20716	853.38836	3.16157	0.00904	962.79925	0.14452
1693	4795.21749	10.37965	11105.90826	646.13138	0.67686	0.02858	816.60127	0.44468
1694	2444.66280	13.61213	3737.23113	532.80900	6.09143	0.24133	522.82828	0.41652
1695	4333.10973	19.36027	6375.22949	718.84206	2.09417	0.05926	765.12467	0.37457
1696	3526.88064	16.71892	16960.02615	492.44420	1.81332	0.16508	441.54149	0.84316
1697	3133.56605	18.14606	10219.53719	433.71362	4.23996	0.19159	365.30061	0.60116
1698	4692.74582	7.47204	18873.08613	116.76807	-5.17780	0.00003	142.83360	0.16675

1699	4876.42206	16.85938	8560.60960	428.87025	3.01257	0.06584	563.70359	0.32602
1700	4666.09025	18.78386	12262.74260	542.31619	3.70731	0.04605	673.95987	0.35198
1701	4226.78393	24.74066	8257.33123	713.93880	2.30460	0.02126	802.92854	0.38154
1702	3407.74333	20.29052	7312.39412	90.07396	4.20060	0.02094	40.24697	1.18809
1703	4673.12520	20.18100	9976.50146	425.72791	4.04130	0.04549	607.82601	0.30366
1704	2942.01650	16.83495	14882.93708	318.43178	4.15304	0.23687	220.59399	0.71713
1705	4549.34687	16.04372	11291.10661	397.54049	5.71558	0.05945	574.43608	0.38245
1706	4843.59791	12.56080	12837.61211	436.55553	3.75770	0.02445	613.90267	0.33667
1707	3696.12566	14.24123	10446.23930	405.60308	0.81013	0.05852	381.70801	0.61218
1708	4604.85506	22.17458	10972.99625	432.01618	4.80642	0.06549	506.71194	0.58088
1709	3566.32090	17.62022	7333.55633	379.65922	1.16651	0.09870	336.76215	0.80606
1710	3133.62004	15.62498	6668.77884	300.90496	1.00120	0.01047	236.73637	0.24755
1711	4737.10309	21.72323	10154.97223	537.54248	2.81538	0.06829	687.77177	0.50045
1712	4687.74812	13.55627	9661.50064	429.94689	1.43058	0.02073	522.12028	0.20790
1713	3735.68827	11.58316	8714.81139	623.01299	0.64861	0.02694	594.66411	0.61545
1714	4711.31447	17.91598	16163.98185	394.67262	3.93269	0.02613	522.63942	0.21562
1715	4943.08585	13.09504	9351.07017	376.20350	3.34033	0.01084	571.50233	0.14503
1716	4244.52608	17.30362	7630.36960	654.17135	-0.77815	0.02125	737.16787	0.53522
1717	4247.78351	19.07837	7243.51297	576.06848	4.21348	0.05585	609.72771	0.41438
1718	4196.58427	12.42478	12629.45304	231.57231	-0.97460	0.00446	282.85702	0.21507
1719	4431.92164	15.52934	6486.15813	725.37129	2.90841	0.02757	811.35894	0.33771
1720	4625.23383	7.76685	16346.77720	103.65321	-3.18653	0.00004	109.56629	0.07911
1721	4972.89020	8.58569	9177.34211	242.86750	-0.32225	0.00341	348.83983	0.10375
1722	4522.69272	11.14118	14927.45774	79.06238	-3.07115	0.00018	69.80083	1.31312
1723	3326.86205	24.28477	11491.47440	547.43108	4.43876	0.05984	479.55572	0.67982
1724	3575.60124	13.34510	5207.18814	486.87722	1.90341	0.03947	408.69366	0.67048
1725	4773.52558	21.64211	20312.01348	669.63618	3.70959	0.03615	887.56283	0.35328
1726	4754.04110	21.57088	19604.47995	534.85387	4.78933	0.03338	681.06287	0.28948
1727	4433.64180	15.57480	6459.35835	676.77846	2.84336	0.02347	744.07958	0.38118
1728	4842.59074	15.76479	8338.59602	442.12944	4.17441	0.03256	654.09310	0.18746
1729	2446.11477	13.60340	3739.37511	465.83800	6.60314	0.23506	479.69076	0.60104
1730	4178.19264	18.97878	8262.82708	661.49777	2.10952	0.03358	659.41900	0.51722
1731	2926.27745	20.06311	8184.37416	469.43548	4.60131	0.27983	326.89766	1.07575
1732	4705.02974	19.15324	9738.97606	611.24936	0.17362	0.04291	783.06489	0.28591
1733	3165.78975	18.25772	10500.18687	348.60955	3.76286	0.18713	276.60691	0.79789
1734	3766.09544	11.90857	9259.21555	673.99023	2.61134	0.03299	679.71133	0.61926
1735	5113.55300	10.97406	14451.21101	115.47427	0.64467	0.00216	141.15054	0.17770
1736	4191.70939	23.77840	8411.65959	828.88608	1.80790	0.05199	837.71842	0.54694
1737	4975.51718	10.29084	9095.96513	277.73541	1.91811	0.00452	411.05808	0.18361
1738	4791.86680	15.77409	7055.43281	380.66580	4.36039	0.01577	559.26906	0.19387
1739	4514.28149	19.81769	7364.19045	410.69129	1.56752	0.04525	480.64020	0.44487
1740	5024.87501	18.28488	10116.88690	364.36893	1.87056	0.01776	526.78969	0.24842
1741	4566.93250	20.64706	17828.88839	296.80635	6.55872	0.09232	343.82252	0.48912
1742	4639.27045	15.41821	10189.91107	327.63842	4.69388	0.09694	443.69834	0.44454
1743	4605.06677	20.65532	21021.08111	395.78073	4.29821	0.08125	508.02255	0.48630
1744	4657.85456	16.40001	17792.58192	252.49454	4.34361	0.09622	306.95230	0.43357
1745	3432.83964	8.17169	12993.10504	415.23941	1.94590	0.03882	448.48891	0.42821
1746	4951.98363	10.75853	10154.29411	167.88170	-0.05898	0.00348	222.00185	0.25594
1747	4646.79682	22.37333	9655.57889	652.66938	3.20447	0.03492	816.00825	0.50495
1748	5091.20629	10.00071	14421.85948	111.01254	-0.63874	0.00210	126.64412	0.27953
1749	4292.27525	18.13734	6921.19065	735.62397	1.99914	0.05767	772.59939	0.30774
1750	3149.82636	19.32622	8127.77646	460.01301	2.44136	0.15304	304.57744	1.92734
1751	3520.09147	17.25712	7922.47086	436.86255	1.16166	0.06853	418.66885	0.56995
1752	4702.57667	19.19241	9856.54113	576.73213	1.20514	0.04825	735.94597	0.30233
1753	3736.19942	11.63999	8705.91117	615.39561	2.48027	0.03502	607.12204	0.57657
1754	3582.89412	13.21239	5375.56356	479.40449	0.57523	0.04099	433.42586	0.56956
1755	4768.14172	8.14222	9217.81207	350.48260	-1.11204	0.00353	489.12568	0.10206
1756	4759.78082	18.19809	10684.35129	562.19478	1.71835	0.03265	730.16632	0.35004
1757	3389.68385	20.20483	8730.85618	123.35366	4.38417	0.01813	97.14201	0.97978
1758	4877.79597	16.86042	8589.14117	344.34819	3.50541	0.04825	435.00501	0.38657
1759	3335.90391	24.26017	11558.17881	678.84364	4.34563	0.06807	606.67335	0.74159
1760	4672.87215	18.85738	12281.44413	450.35571	5.35950	0.04688	555.34947	0.38740
1761	4762.43640	14.79987	10467.52476	341.97497	3.21846	0.02459	499.17121	0.34297
1762	4342.73473	16.18714	9389.57806	340.30018	6.28679	0.10225	446.11790	0.46325
1763	4339.09716	23.79074	10415.57898	771.58836	3.75188	0.03104	801.04196	0.56797
1764	4293.54136	15.05572	12164.78119	501.24756	-1.74995	0.01862	600.07312	0.35306
1765	3168.52038	20.16637	10404.35668	436.28885	3.65991	0.15380	237.37237	1.29691
1766	4399.10003	6.55898	7939.53117	379.82572	-1.42542	0.00299	532.27911	0.09602
1767	4895.61584	9.52313	10173.20677	623.47741	-0.33680	0.02713	812.41587	0.34280
1768	4504.44918	20.99718	9931.79343	432.48695	5.59370	0.10450	507.98363	0.51603
1769	4333.82965	19.34398	6379.70665	736.80766	2.87551	0.06118	792.46673	0.35637

1770	4488.63657	23.23616	7282.00616	564.11407	6.06502	0.12310	644.33858	0.73918
1771	4146.82872	16.37186	8962.69537	626.57934	-1.25071	0.01808	703.20128	0.45886
1772	4658.39771	16.66216	21288.66716	51.39919	-4.35910	0.00001	9.74490	1.65520
1773	3342.98686	24.26868	11636.87553	633.47785	3.66590	0.06189	584.73459	0.53292
1774	4576.15539	7.77003	9012.86813	291.33840	-2.83823	0.00386	391.97037	0.10825
1775	4266.49440	23.22441	11939.70086	713.76038	4.00252	0.00907	871.55696	0.11887
1776	4240.95781	17.38064	7596.19470	759.93349	0.28269	0.02233	846.71919	0.49383
1777	4686.73272	13.56156	9656.86063	426.74296	1.37245	0.02111	516.65672	0.22355
1778	2888.65017	15.73807	15577.14609	305.00561	4.08418	0.21665	224.87950	0.84894
1779	4536.90290	20.24671	20340.46129	342.22728	6.14356	0.11277	436.92031	0.41620
1780	3277.94760	18.66344	18669.43078	442.63232	2.15263	0.21830	390.07217	0.90302
1781	4794.01146	10.36402	11074.80441	589.46052	1.47143	0.03782	744.36976	0.41904
1782	3668.79649	14.08937	9914.36855	598.45824	2.48067	0.07654	625.21099	0.64885
1783	4431.18674	15.58691	6451.09616	630.13204	3.46721	0.02426	689.83794	0.42664
1784	3978.06903	10.03624	12968.64591	187.09932	-1.49487	0.00430	201.08359	0.26187
1785	4399.44058	6.56556	8073.30871	381.95896	-1.67637	0.00325	526.77092	0.06434
1786	4975.36257	9.89165	8926.04799	394.07200	-0.12559	0.00743	554.49370	0.15835
1787	4736.62000	21.71247	10156.65075	450.28989	3.79964	0.06672	561.33280	0.50769
1788	4509.77732	19.80790	7326.98622	622.72174	2.29431	0.06037	735.07405	0.42536
1789	4855.90270	13.74631	11579.97549	578.08839	2.09646	0.04562	745.40497	0.51227
1790	4766.82126	18.35674	10669.05743	676.75616	1.84135	0.03960	843.42930	0.33409
1791	4449.10505	19.78882	8007.86370	356.90718	4.76553	0.08103	392.90193	0.59261
1792	4145.95310	16.43605	8938.51766	664.37442	0.42442	0.01985	751.76734	0.39319
1793	4401.72247	6.53973	8152.55838	386.32435	-3.45343	0.00271	514.04211	0.13954
1794	4238.39571	17.44304	7556.99198	611.49029	0.37605	0.02728	663.10502	0.44871
1795	3577.32174	13.36985	5214.50342	608.18968	2.03883	0.04027	561.23955	0.60635
1796	3538.63243	9.36291	7263.81931	582.38440	2.73961	0.04329	502.23490	0.70334
1797	4704.61940	19.16978	9934.06381	651.64566	1.54264	0.04258	828.72615	0.27149
1798	3503.34260	15.37147	11545.34839	496.91509	1.51912	0.09271	446.07309	0.47507
1799	3735.16197	11.58446	8707.24808	621.21318	0.90749	0.03184	642.03024	0.58804
1800	4843.69269	12.56031	13050.72923	390.47200	3.32086	0.02204	547.29883	0.30677
1801	4146.90675	16.36859	9046.39082	573.95726	-1.19299	0.01816	633.37182	0.46237
1802	4920.71602	19.95471	11509.54454	404.63284	2.76498	0.05251	548.00986	0.39414
1803	4090.14204	19.87441	14943.85670	86.71938	2.98454	0.01102	50.65831	0.56290
1804	4565.65193	17.95538	8196.59200	508.00214	2.20114	0.02723	692.65483	0.31362
1805	4033.50081	25.73454	8832.26177	723.55892	2.54094	0.01794	707.87337	0.45592
1806	4692.80035	18.27406	16549.07659	439.86068	4.90821	0.03339	581.22759	0.13019
1807	3773.49996	12.03726	9412.52743	579.77488	-0.47486	0.03060	572.24416	0.49302
1808	5088.11749	9.97662	16724.66537	117.94033	0.25270	0.00221	136.42239	0.27655
1809	4792.05762	15.79917	7403.51362	440.75526	2.63489	0.01393	642.62727	0.19561
1810	3780.33865	24.18367	10997.10001	716.98462	3.30701	0.04023	698.05499	0.77889
1811	5024.41954	18.12175	10147.88739	433.35966	1.57231	0.01531	620.00422	0.24551
1812	3534.36002	16.72411	17248.87963	379.53268	0.91353	0.14891	340.76527	0.63377
1813	4692.90007	19.10975	9868.18470	625.80852	2.48870	0.04993	777.47422	0.31105
1814	3385.26375	24.41927	12008.86008	454.00438	2.84608	0.05267	339.42953	0.62897
1815	4911.94142	13.67217	8084.23490	522.79856	3.49809	0.01774	758.75089	0.21138
1816	4528.43241	20.06875	24799.24293	303.05586	5.78234	0.11747	359.17172	0.33759
1817	3572.91898	17.64544	7377.11628	419.46026	0.52305	0.08698	359.18035	0.82632
1818	3985.10330	16.78599	5618.04304	455.64564	-2.82490	0.02583	526.51349	0.79296
1819	4831.40032	14.36993	11282.24633	390.68824	3.82789	0.03119	585.07098	0.24393
1820	4238.55197	17.41425	7575.19902	673.60631	-0.83979	0.02239	773.95124	0.52368
1821	4239.36765	24.67965	8281.35457	697.21755	1.42520	0.02028	829.04462	0.33721
1822	3703.41226	7.83243	6095.44965	366.89758	-1.67101	0.02050	368.19474	0.50574
1823	3127.54606	15.56831	6661.73941	384.93088	1.62434	0.01144	356.85898	0.25331
1824	4295.48043	15.22003	12166.57354	454.97451	-0.30384	0.02114	554.11029	0.26565
1825	2896.13626	16.41610	14624.66831	379.55377	4.71441	0.18308	320.78930	0.63799
1826	4281.60913	14.16515	6882.44088	568.79550	-2.71593	0.02044	654.51704	0.47014
1827	3397.65998	11.74448	7560.05074	489.72155	2.16389	0.07660	369.85846	0.71218
1828	4372.73710	20.43464	9933.80395	492.70218	2.71006	0.04262	547.76239	0.46620
1829	4660.07435	19.54902	11889.90231	360.47744	5.22780	0.09686	464.48717	0.49498
1830	5044.99237	13.48904	8839.72083	446.93062	2.09005	0.01370	658.21769	0.20445
1831	4258.39552	23.31779	12461.67728	1010.55041	5.77546	0.01221	1158.20089	0.12895
1832	4281.57471	14.17413	6879.70082	523.39184	-3.46879	0.02080	597.02051	0.45002
1833	5109.75140	11.56153	12919.30136	62.67242	-1.01049	0.00060	43.15371	0.46416
1834	2491.71017	14.35835	3674.22508	340.35894	6.19880	0.31425	307.28377	0.75476
1835	4335.74641	17.15698	8154.53578	620.06106	3.22003	0.05094	658.35949	0.32212
1836	4877.74568	16.85312	8597.34385	336.25638	3.55273	0.05691	437.89434	0.39561
1837	4724.89045	19.34750	9903.36736	517.49838	1.57777	0.03943	648.46152	0.28439
1838	3782.48549	24.19603	11004.32081	718.75855	3.06275	0.03917	676.83883	0.75687
1839	3332.33509	24.24838	11551.78342	510.59256	3.92984	0.06579	413.89247	0.59219
1840	4070.69659	25.71526	8932.72772	675.02402	2.06669	0.01176	698.90026	0.43878

1841	4617.25094	21.71256	15564.31522	575.61722	5.66652	0.07901	689.95217	0.53055
1842	3173.97845	16.75009	9643.41480	667.14162	3.29624	0.23902	634.40440	0.61490
1843	4566.62984	17.96595	8204.88745	367.12669	2.87188	0.02761	483.37722	0.29152
1844	3139.82507	16.45579	9459.45420	535.99685	3.34430	0.22810	502.79119	0.61923
1845	4609.46151	18.88539	8427.93711	399.35574	5.13404	0.03771	498.68771	0.32747
1846	2570.07232	15.58927	11178.16660	439.23941	5.21712	0.30128	456.95118	0.14236
1847	4678.80243	21.50127	9182.51245	495.41924	3.65498	0.05791	602.22860	0.52011
1848	3736.16920	11.52577	8788.93674	483.68364	-0.27010	0.03134	450.80364	0.60834
1849	4973.25279	8.59279	8943.24082	261.66257	0.74773	0.00402	378.19116	0.09673
1850	3915.04697	12.93172	12079.90781	467.09001	-0.32067	0.03474	548.95303	0.44522
1851	4441.06261	21.73221	7591.24995	424.36784	2.67486	0.03019	524.14123	0.30782
1852	4709.43742	19.22920	12649.37061	266.03783	3.33230	0.08140	321.76426	0.57274
1853	4439.29876	20.41349	8222.16131	590.72083	3.96988	0.11235	682.84496	0.55046
1854	4560.73090	17.94549	8155.52891	433.98043	3.42585	0.03134	568.44490	0.22860
1855	4886.45420	9.35957	12722.06296	492.01387	1.60020	0.01866	729.09447	0.25062
1856	4012.32489	9.40914	9083.74696	316.26730	-2.01132	0.00702	381.36933	0.23483
1857	4850.44900	15.84016	8850.00269	431.39206	3.62845	0.02218	648.82949	0.24518
1858	5199.97758	14.29036	9609.39666	61.20100	-3.64400	0.00021	59.98404	1.85751
1859	4677.68681	10.83133	16705.07478	111.03413	2.78025	0.01212	107.78225	0.35740
1860	4373.40072	20.43091	9917.30420	545.66170	3.00142	0.04872	599.40272	0.41846
1861	3847.43564	20.39001	12355.16530	391.31353	-1.44742	0.08275	376.43981	0.87643
1862	4266.11294	16.18294	7771.40533	789.15583	1.89801	0.05343	847.40683	0.50493
1863	3881.28684	12.52712	13548.62858	145.95896	-2.74585	0.00454	146.40132	0.73727
1864	3660.76078	23.93494	10538.02217	857.06252	7.18403	0.06426	610.30471	1.14032
1865	3130.64894	15.88796	6808.50400	286.99327	1.06260	0.01135	227.29201	0.29529
1866	4145.59047	16.44984	8932.19051	603.45841	0.33784	0.02089	619.92322	0.38467
1867	4547.76442	16.08028	11316.92877	347.32210	4.94509	0.07400	480.08841	0.38729
1868	3919.80223	18.53634	6913.51140	527.33219	5.98180	0.05765	430.73014	0.63856
1869	4551.87687	17.76793	8421.19418	537.47788	2.26606	0.02695	703.04367	0.30556
1870	3568.09549	17.64325	7378.31550	470.90215	-0.04521	0.09186	470.08144	0.61831
1871	3859.37598	24.40239	6385.58467	946.80079	3.28565	0.02255	897.35896	0.77948
1872	5012.84409	10.00107	9472.53904	213.28134	0.66561	0.00460	300.20037	0.15265
1873	3532.83516	15.23906	11897.44743	496.82605	0.09833	0.07080	465.55697	0.63433
1874	4917.92152	10.76224	8766.34088	153.53950	1.28436	0.00569	202.27945	0.09692
1875	4463.32689	20.99921	9401.19818	581.36742	3.19264	0.04444	752.26434	0.37409
1876	4572.63058	10.31309	9284.73857	532.75858	-1.18032	0.03657	685.31801	0.21222
1877	2480.12780	15.14041	2976.60360	459.17685	5.61912	0.23225	561.89532	1.40825
1878	4430.51860	14.64667	6233.87194	563.39446	3.46908	0.02581	622.63010	0.32804
1879	3130.23769	15.58894	6657.95115	327.37277	2.99231	0.01526	260.76588	0.24716
1880	3224.17854	14.51762	10066.20148	453.68318	2.57776	0.07466	473.34044	0.45246
1881	4471.37662	20.44464	13717.34397	509.60356	5.89610	0.10433	611.26541	0.46224
1882	3752.55614	20.74492	13548.11786	96.20796	2.71546	0.01381	58.12503	1.21391
1883	3374.62029	20.20445	10364.94360	149.37633	4.15179	0.01855	120.90623	1.02253
1884	3706.21702	24.57793	6223.05279	627.42474	2.50219	0.04099	519.20665	0.47770
1885	3474.99573	13.93031	7310.88520	650.42785	2.61501	0.06535	605.46059	0.58632
1886	2566.18721	15.53827	10734.25465	466.10771	5.65870	0.29135	455.13224	0.80046
1887	3708.13268	24.59993	6217.31886	697.12789	3.24983	0.04961	643.46471	0.47538
1888	3931.33405	18.66634	6896.74388	786.93822	6.36049	0.05780	687.11605	0.51803
1889	4676.85243	18.87601	12285.78377	456.52538	6.10121	0.03701	572.83881	0.38199
1890	4833.28710	14.43131	10644.35535	381.14757	3.96877	0.03433	575.28893	0.19152
1891	4024.10327	13.32536	15718.44023	125.72493	-0.76229	0.00225	118.77276	0.57011
1892	4845.72295	15.78220	8826.21069	452.34670	2.76365	0.02709	663.56439	0.24756
1893	3715.23833	24.60599	6220.58789	570.33123	2.81171	0.05172	460.22135	0.47437
1894	4536.95859	15.87322	11215.85209	191.22464	5.06585	0.08555	221.68661	0.33811
1895	3736.35998	13.08547	13566.56829	177.21846	-0.77718	0.00309	193.25644	0.28303
1896	4455.12335	19.56787	5704.37188	507.61621	3.21236	0.03848	577.51881	0.41581
1897	2552.77939	15.42045	4086.62961	523.83740	5.44260	0.26532	478.55288	0.86574
1898	4973.32777	16.92576	10637.74291	56.08001	-1.28077	0.00066	43.98219	1.15630
1899	3668.44632	14.08798	9906.89159	433.32823	1.41655	0.07649	394.36126	0.65237
1900	4852.84427	13.67837	11914.96831	475.00385	2.05095	0.03871	600.46025	0.45987
1901	4705.20940	11.10383	15922.64689	180.01828	1.44727	0.00527	246.88270	0.20130
1902	4201.16641	23.78347	8498.67196	779.29256	2.04623	0.04972	864.93516	0.58990
1903	4399.81606	6.57874	7890.73582	411.93994	-2.03702	0.00357	567.71162	0.06730
1904	3263.95974	19.91607	13584.59862	371.95450	1.99008	0.17592	291.15164	0.92700
1905	4178.82647	18.98056	8273.79542	660.56953	1.86353	0.03202	687.96518	0.54477
1906	3128.00730	18.09394	10233.36091	552.94907	3.91741	0.19406	507.21468	0.87044
1907	4912.17305	13.67939	8077.92156	419.02988	3.29971	0.01681	624.59672	0.21854
1908	4675.07639	10.76092	16820.17627	100.68659	0.58342	0.00909	91.82319	0.41898
1909	4970.12685	9.93962	8512.18561	357.15795	2.57609	0.00955	492.31398	0.16527
1910	4256.07875	23.31128	12252.82823	887.77469	5.64565	0.01277	1065.89072	0.12984
1911	4790.76660	10.28749	11050.81081	564.48106	4.26160	0.03927	730.70141	0.44019

1912	4628.66218	22.26822	9847.50054	677.93142	1.92616	0.03694	852.04099	0.39492
1913	4827.89799	9.74832	7647.24727	154.99623	0.39680	0.00591	195.05081	0.28467
1914	4691.68372	15.37352	14157.31866	426.97180	3.84040	0.06465	608.66949	0.34772
1915	4340.46006	18.29635	6903.21030	387.53045	3.62288	0.03109	378.03054	0.55303
1916	3175.26907	16.06619	9641.41960	492.72040	3.76617	0.22716	380.82603	0.71197
1917	4401.83117	6.54438	8154.32684	344.27244	-4.13211	0.00282	464.05228	0.11195
1918	4290.83609	18.11037	6899.19347	740.50750	2.19652	0.05149	812.43072	0.44750
1919	2899.57929	19.98859	7789.85192	589.76375	5.44142	0.27237	471.68656	1.10120
1920	4574.94182	7.67530	8849.91518	277.97673	-1.96797	0.00405	364.94721	0.08260
1921	2895.75429	16.57902	14328.84120	391.70677	4.46236	0.23412	274.79145	0.80431
1922	4976.12206	10.31234	9102.08737	331.01087	0.60229	0.00420	504.88493	0.16732
1923	2908.23804	16.23018	14903.74513	386.90579	4.76500	0.20709	299.92179	0.71611
1924	4658.63839	19.54489	12708.28810	485.44237	4.12804	0.09396	667.90610	0.48078
1925	3765.97887	11.90250	9260.10359	568.66975	1.44861	0.03307	527.37243	0.63171
1926	4821.29329	20.94502	7797.19758	535.99985	2.13002	0.04376	658.59386	0.40670
1927	4317.37415	18.26510	7687.37797	436.19377	7.82716	0.11079	517.94835	0.40990
1928	3379.96401	20.40200	10009.84523	124.88616	3.53224	0.01993	91.82337	0.96288
1929	4684.60759	13.63554	9873.54443	415.10373	2.74811	0.02099	503.52718	0.22346
1930	4086.50704	18.94734	6720.11404	739.38722	3.80025	0.06743	752.51996	0.60532
1931	3524.91827	17.31113	7947.23167	401.03011	1.53802	0.07036	386.32283	0.77663
1932	4420.00561	17.91234	7193.70907	508.32510	2.21241	0.03746	568.38370	0.33793
1933	4610.45527	22.32715	8661.21715	602.99080	2.88228	0.05022	732.36222	0.37125
1934	4151.20234	13.07830	12729.41476	242.34382	0.74846	0.01004	286.22045	0.23132
1935	3380.08528	9.61419	6911.97090	491.74150	2.86138	0.07066	530.32704	0.59229
1936	5044.06937	13.46218	8813.05268	351.26389	1.07467	0.01338	519.37146	0.19588
1937	4630.39973	7.65575	16398.89086	119.81807	-3.74423	0.00002	148.37525	0.07862
1938	4979.97235	9.58540	8803.12034	256.22751	-0.53600	0.00768	338.14129	0.19685
1939	4336.54154	16.12068	9300.74444	452.35196	5.98282	0.09662	618.22555	0.42914
1940	4080.81801	21.82462	8916.85446	715.10904	3.00865	0.03876	718.96077	0.51839
1941	2924.28427	19.98230	8221.66856	546.02459	4.97616	0.28532	385.78399	1.07196
1942	4423.63049	11.43813	8406.26626	578.41597	-1.71001	0.01039	711.77927	0.28922
1943	3532.07676	15.28122	11883.13967	446.62065	1.49863	0.07163	390.94148	0.48837
1944	4887.86470	9.39219	12628.85498	439.36179	3.47616	0.02178	655.75944	0.19764
1945	4335.49055	18.28841	6885.89445	630.78959	4.01445	0.03643	689.43022	0.51371
1946	3631.56436	23.24768	5182.86105	720.75529	7.44868	0.07085	749.71547	0.51849
1947	3773.57493	12.03631	9411.32606	533.42145	0.30989	0.03026	520.85564	0.49315
1948	4847.43029	13.60617	12154.64450	332.93834	0.68579	0.03524	397.96130	0.46817
1949	3770.05618	9.64750	8363.19150	434.49993	0.62981	0.05536	383.95517	0.56743
1950	3987.02940	22.94683	7941.11763	763.01981	2.13886	0.03239	817.48586	0.53326
1951	4668.69139	16.53711	18088.55319	467.11504	3.63786	0.09199	654.60644	0.44651
1952	4543.87343	15.89357	11137.45373	381.09201	6.13898	0.08859	527.38306	0.30300
1953	4198.26158	21.01967	10548.56973	750.61111	2.52798	0.03266	802.05663	0.53869
1954	4958.16864	6.64867	9534.53057	343.68592	-2.87728	0.00667	492.33961	0.18943
1955	4058.60968	9.19573	11416.06704	165.31825	-1.29360	0.00614	201.51543	0.12547
1956	4843.78145	12.68346	14501.42592	455.82412	3.64312	0.02557	633.03596	0.23155
1957	4834.25418	14.44378	11292.33667	280.99402	3.18024	0.03099	422.40421	0.23607
1958	3533.91199	15.25542	11900.56414	408.08511	0.57967	0.07291	346.05896	0.55659
1959	3144.31787	16.11848	6813.02471	251.61555	0.97968	0.01137	176.94871	0.32468
1960	4782.35500	16.50824	9773.67891	569.27066	-0.32582	0.02923	743.05080	0.31416
1961	4637.05359	16.97585	10100.61028	293.77815	4.23479	0.05865	390.70485	0.52855
1962	3679.39224	7.65563	5915.69874	418.93902	-0.50652	0.02589	403.51591	0.52940
1963	4705.44906	19.15366	9946.11613	457.04521	0.64526	0.04141	585.32441	0.31231
1964	4058.69073	9.06353	11576.71343	272.20969	-1.51681	0.00566	384.97819	0.11030
1965	4398.69770	6.54049	7818.36891	411.42818	-0.64305	0.00391	524.23179	0.06702
1966	3702.50440	24.98696	13269.42727	83.38585	4.19602	0.01063	32.91258	1.23459
1967	3901.01228	13.49470	11261.41725	342.61482	-0.84278	0.03213	356.71086	0.41290
1968	4892.96919	9.46369	10133.51629	570.93009	0.19919	0.03090	731.91662	0.38137
1969	4173.17325	18.96154	8206.67071	691.07695	1.74429	0.03386	734.37580	0.45025
1970	3362.19136	7.36602	13436.40684	317.99376	2.05784	0.03391	266.36134	0.48692
1971	4449.09419	20.33997	16240.15864	708.32083	3.49915	0.01797	871.45351	0.27486
1972	3745.53900	12.99291	13658.21793	136.14765	-0.45855	0.00336	128.71678	0.31750
1973	4913.59150	13.69463	8019.09564	420.03190	3.79561	0.01853	621.48949	0.18387
1974	3501.70850	15.32634	11503.54208	422.53975	2.26684	0.09165	360.25929	0.51296
1975	5010.79425	6.81276	11176.83815	265.59526	-4.46413	0.00104	396.37773	0.03900
1976	4873.52677	7.68998	9878.05459	406.90785	0.00916	0.00845	567.23361	0.22949
1977	4508.29268	23.37620	7383.42208	371.38937	6.10614	0.12901	400.06762	0.62479
1978	4895.19774	9.51175	10014.67262	511.11225	-0.55565	0.02332	682.93210	0.39014
1979	4432.52418	14.72838	6183.86665	643.94852	3.25444	0.02401	723.59851	0.33868
1980	4707.15582	11.03090	15927.43133	98.66365	2.99301	0.00615	95.33086	0.23037
1981	4710.60718	17.92511	16204.87670	402.39549	2.42284	0.02535	536.47688	0.20930
1982	3178.20274	15.87250	12198.98076	362.36417	3.27263	0.10521	267.91673	0.65829

1983	4778.95763	10.37852	11832.26784	518.53167	-0.14107	0.01322	681.36792	0.19587
1984	4194.79370	21.01969	10517.77192	853.09449	2.36824	0.03415	837.94882	0.54361
1985	4975.62280	10.31660	8720.98720	270.39260	2.35517	0.00479	405.17776	0.12587
1986	4449.47870	19.78124	7948.66894	416.85136	6.42736	0.10795	478.66996	0.58185
1987	3171.52843	15.83297	12149.01506	362.18697	3.99508	0.10278	245.38773	0.66265
1988	4890.03598	9.33682	10184.62113	511.89749	-1.61001	0.02295	665.05066	0.41314
1989	4689.34035	18.26059	16674.22420	377.24761	3.74161	0.02981	505.24420	0.16576
1990	3669.39735	14.09320	9919.67507	455.86249	1.40045	0.06724	454.94513	0.65924
1991	3430.95514	8.14495	12948.27913	454.27712	2.14652	0.03827	477.47928	0.41246
1992	3735.72913	11.61337	8713.10728	517.96660	0.47318	0.02917	506.48231	0.59399
1993	4982.50110	17.75270	8860.24076	698.03169	1.65690	0.02426	902.29795	0.30219
1994	4233.88123	14.84320	14629.66025	84.68467	-2.10929	0.00241	70.71950	0.97598
1995	4690.83134	18.25848	16551.71099	379.35528	4.00223	0.03332	502.68466	0.14021
1996	4708.18580	15.76925	11409.86358	431.67856	5.15892	0.05005	565.46791	0.38821
1997	3341.60507	24.29024	11608.74252	610.25161	4.03722	0.06125	535.47750	0.72853
1998	4579.46109	7.96277	8842.29482	260.07700	-3.37776	0.00564	333.40088	0.16243
1999	4139.69898	12.88328	12626.56436	307.62880	-0.95194	0.00596	413.89022	0.12895
2000	4945.31436	13.15064	9380.40123	396.26802	2.06069	0.00984	600.55493	0.19338
2001	5003.01635	7.78236	14888.72328	170.74725	-1.40792	0.00186	245.26983	0.08520
2002	3679.55748	7.67637	5910.10523	385.18818	-1.18101	0.02760	409.57971	0.47714
2003	4768.26348	18.38146	10680.40596	551.11437	2.51655	0.03749	692.98326	0.35124
2004	4367.34622	18.86190	9575.38897	518.60902	2.31167	0.04683	595.27279	0.40148
2005	4844.76674	15.30573	11128.09600	433.66565	3.31410	0.02620	631.61979	0.32736
2006	4237.84009	23.40817	13335.30303	855.09208	4.02043	0.01057	974.17557	0.16004
2007	2543.81651	16.87107	3561.15778	451.87378	5.19373	0.09537	501.57955	2.03601
2008	3412.90801	11.53468	7644.15180	562.28542	2.00308	0.07394	473.17147	0.66687
2009	3401.00337	9.51302	6817.39761	291.86944	1.14465	0.04983	239.35350	0.62991
2010	4725.26707	19.36253	9896.37758	669.47804	1.04568	0.03756	869.04435	0.27165
2011	4433.39094	14.63973	6179.49031	623.64200	4.18772	0.02886	690.58656	0.28639
2012	4425.55463	11.54220	8405.98398	550.55820	-2.58248	0.01120	690.15389	0.27577
2013	4202.08842	21.00357	10542.74567	704.82279	2.78010	0.03982	727.72238	0.52256
2014	3775.17191	12.07654	9408.20081	640.68087	-0.01256	0.02983	645.88569	0.49637
2015	3563.65710	23.31346	9305.56032	1103.50946	8.22453	0.09095	847.02133	1.23771
2016	2549.94444	14.25353	3730.72395	478.18300	5.54191	0.29418	511.61329	1.94694
2017	4649.53690	20.88914	8748.58502	531.54431	3.65264	0.09153	646.79222	0.50584
2018	3433.50713	8.13545	13731.79505	387.23600	1.69506	0.03247	425.17472	0.48689
2019	4004.93661	9.93387	9312.43393	279.71957	-1.30665	0.00985	336.73303	0.16705
2020	2494.64286	15.12113	4130.91047	474.06826	5.75922	0.33563	537.41284	0.78424
2021	3575.18242	17.65325	7360.44415	445.71004	-0.39352	0.09156	396.03280	0.83134
2022	4057.86060	25.70370	8936.72903	768.90853	2.10695	0.01374	858.17348	0.41662
2023	4416.38585	17.87711	7181.77647	510.30106	2.46320	0.04990	581.87686	0.45678
2024	3222.05745	14.52618	10055.01521	380.39944	2.83851	0.08471	379.93374	0.46777
2025	4069.85506	25.71210	8960.61187	809.45965	2.91572	0.01122	857.80510	0.45314
2026	4340.05310	17.15539	8219.66769	635.55465	3.45559	0.03925	684.37194	0.37466
2027	4899.21362	13.48903	8172.37316	367.47460	1.75170	0.01591	532.70563	0.23564
2028	3214.27736	19.23839	13146.73561	489.64079	2.94519	0.19757	464.81416	0.73299
2029	4281.15999	14.24383	6815.41906	456.98185	-1.79931	0.02188	524.35271	0.43062
2030	4509.12127	11.37927	14972.64232	78.58572	-2.32280	0.00024	64.38248	1.33548
2031	3616.71149	13.29142	29798.29834	266.76994	0.80284	0.01521	328.62842	0.22763
2032	4674.97076	18.88689	12286.97460	615.63360	4.85005	0.04780	763.96660	0.38296
2033	4457.53006	19.56325	5694.12025	544.94217	3.90265	0.04130	610.15427	0.39603
2034	3857.57461	24.00573	12312.08430	761.73533	5.58823	0.01635	722.58287	0.06939
2035	3418.11711	24.12996	11287.49275	1436.97746	10.44677	0.17300	1008.79141	1.98583
2036	3695.96435	14.23650	10442.67592	450.68733	-0.85833	0.05398	425.45687	0.63460
2037	4373.20707	20.50088	9900.99432	596.43195	1.71362	0.04373	691.32068	0.42415
2038	2982.18147	24.86666	6955.45837	506.99221	6.47308	0.16156	269.15811	1.02768
2039	3427.46717	8.09049	13653.70282	447.77094	2.64588	0.03735	493.04966	0.42532
2040	3550.93860	17.43843	7375.01529	475.61841	1.26262	0.12588	434.72621	0.85610
2041	3490.40315	18.87337	18693.18963	447.05799	0.42975	0.04902	402.96717	1.74871
2042	4679.45525	21.50572	9127.13042	613.80720	3.03175	0.05089	752.68286	0.50638
2043	3194.41895	16.71969	7065.89676	355.45223	1.79220	0.10211	264.06303	0.65724
2044	4431.50837	14.77411	6197.62962	676.62497	2.40029	0.02418	776.82680	0.33537
2045	4367.54281	18.80188	9613.16542	454.44457	1.64080	0.04341	500.44933	0.35493
2046	3575.94860	13.29705	5287.67033	579.29583	1.39205	0.04203	555.36456	0.54888
2047	4051.44030	9.14930	11753.40458	238.37758	-1.35876	0.00577	325.32065	0.11301
2048	3581.90125	13.21659	5369.50642	547.46714	0.39371	0.04347	504.84347	0.56812
2049	4980.13094	17.63828	8842.15463	780.63095	0.98177	0.01809	1011.29292	0.29811
2050	4677.88129	10.79222	16739.60164	88.31941	1.73217	0.01183	69.38063	0.34366
2051	4352.31622	23.78877	10463.77006	839.77125	4.02585	0.03740	928.37856	0.56196
2052	4337.03742	23.79972	10419.84307	861.79879	3.29909	0.02698	925.62841	0.54893
2053	5112.48674	10.95479	14080.73738	138.35392	-0.02144	0.00258	189.40635	0.15791

2054	4010.81809	17.14882	5799.00894	404.51688	-3.24700	0.02648	459.47661	0.81562
2055	4298.13146	15.21566	12158.40712	578.65371	-1.07057	0.02000	694.68561	0.31417
2056	4003.91752	9.96878	9363.25661	396.78795	-1.02426	0.01202	474.03518	0.16618
2057	4294.68634	15.22767	12174.56072	442.39960	-1.23981	0.02301	502.57577	0.26110
2058	2572.55672	15.42325	10832.94710	398.79524	5.87554	0.29905	353.23960	0.75857
2059	4399.04550	6.55749	7942.95126	451.29607	-2.59196	0.00301	616.24957	0.07557
2060	4236.97420	23.41031	13323.63684	778.57035	4.30488	0.01077	892.91365	0.16095
2061	4821.23180	20.93875	7796.93130	378.94024	2.23830	0.04255	439.65050	0.43473
2062	5282.92405	7.88890	17472.81646	36.68704	-5.15556	0.00012	9.82254	1.50858
2063	3571.76436	17.64312	7384.70775	417.95271	-0.03896	0.09137	382.49259	0.83340
2064	4431.42445	20.23795	8152.59877	602.01272	5.18089	0.11982	720.47049	0.53745
2065	4378.85960	18.87762	8589.89678	558.56013	1.60882	0.03616	624.30690	0.36461
2066	4418.30809	17.89890	7183.59657	561.71006	2.37311	0.03707	637.83458	0.39879
2067	3437.52779	8.16972	13782.60576	328.28804	1.55391	0.03417	352.56641	0.41806
2068	4640.68581	15.42918	10147.40708	414.80652	3.93263	0.09820	577.84280	0.43231
2069	4492.73100	12.54168	9294.50252	678.02928	0.38987	0.02819	798.62499	0.26986
2070	4410.39220	17.83012	7149.74604	616.59146	3.02033	0.05684	701.59807	0.33359
2071	3412.90675	11.54035	7646.55706	537.07345	1.67566	0.07461	445.12866	0.66177
2072	4787.41917	22.26331	10693.59300	372.59894	2.48346	0.05239	452.75570	0.49869
2073	4890.22790	12.71362	7280.26379	392.59145	3.34393	0.03915	537.17212	0.30195
2074	4496.71746	16.57276	8473.58780	581.54283	0.76725	0.04609	694.77599	0.47565
2075	4690.97337	19.08375	9854.37695	608.36427	2.06651	0.04961	785.81329	0.30803
2076	4745.96258	21.54393	19470.69844	527.56436	4.06156	0.03340	673.98887	0.36845
2077	3565.19787	25.35831	9349.26448	79.80060	3.15185	0.01011	30.80271	1.43897
2078	4444.40183	20.47060	8289.81380	419.26698	6.24801	0.10759	422.32359	0.57262
2079	4243.62315	19.06193	7236.44896	449.53294	4.09092	0.05449	451.56136	0.40553
2080	4653.50309	22.41626	9642.33836	702.24123	1.72180	0.03938	900.29711	0.39586
2081	4335.11977	17.20337	8160.25747	605.59061	3.54176	0.04257	645.56951	0.43132
2082	4569.36612	22.56082	13128.77376	655.37203	4.34019	0.02548	844.56028	0.37997
2083	4421.22415	16.96493	10256.80255	346.09484	5.09647	0.06828	442.27125	0.61030
2084	3576.80241	13.30496	5255.38650	613.75928	1.59659	0.03674	592.18513	0.70423
2085	4767.11488	8.13856	9249.35851	365.21198	-1.10124	0.00372	518.85405	0.09246
2086	4423.26604	11.46385	8402.71049	672.21272	-0.11823	0.01532	827.80210	0.12406
2087	4512.95770	21.14264	10018.58121	357.78839	5.97352	0.09599	400.27803	0.53517
2088	3534.05908	17.36675	7973.23558	460.34343	0.52440	0.05871	474.58843	0.58162
2089	4758.94911	8.20745	9918.83594	280.80410	-5.12362	0.00301	389.13339	0.07618
2090	4767.63639	14.72379	11089.19876	417.10004	2.38615	0.01993	596.60932	0.37751
2091	4767.99343	18.37956	10679.36952	595.67476	2.67061	0.03431	746.48163	0.35452
2092	4709.71676	17.93114	16191.53233	394.99760	4.09299	0.02664	524.12767	0.22284
2093	3740.35322	11.70269	7554.44375	854.82645	2.84422	0.02669	797.79538	0.66953
2094	2823.46922	14.77349	14170.81072	457.17507	3.95660	0.22641	398.69036	0.66846
2095	4084.69593	18.97663	6711.19983	714.59141	3.21795	0.07392	746.41979	0.61518
2096	4236.23791	23.42207	12369.08639	845.36530	3.55279	0.01074	963.29747	0.14963
2097	4064.84113	25.72104	8908.21917	812.55562	2.01368	0.01127	825.22758	0.45308
2098	4525.80340	20.05143	21580.51821	511.92228	5.27851	0.11984	683.41119	0.42947
2099	3153.73477	24.97387	7962.45902	589.39612	3.80384	0.11546	367.97414	1.17689
2100	5085.33532	9.73042	14763.54818	138.15888	-2.23900	0.00233	175.52493	0.36487
2101	3531.73805	16.76673	17100.49681	436.61950	2.26930	0.17016	379.24718	0.84992
2102	4420.12955	16.95563	10247.85571	417.15501	5.30673	0.07187	544.93040	0.60138
2103	3901.80697	24.65608	10017.85193	972.44982	7.27322	0.01547	971.30695	0.31028
2104	4661.31439	16.45521	17829.65997	416.75678	4.68102	0.09978	555.57395	0.43400
2105	4675.81345	18.87134	12285.31401	664.14137	4.30795	0.04724	836.97994	0.38159
2106	5088.98713	13.31187	12206.58153	102.93739	0.66681	0.00118	114.75721	0.33817
2107	4958.18973	6.85752	16468.27643	122.86886	-1.69156	0.00166	147.54678	0.17061
2108	4334.43135	17.22399	8162.56345	591.26169	3.47605	0.04219	621.42202	0.39615
2109	4399.50802	6.56791	8079.88201	490.55248	-1.87350	0.00335	659.62330	0.06548
2110	5111.85260	10.95685	16225.10412	161.24957	-1.04536	0.00234	224.24484	0.13877
2111	3797.71620	24.62377	12737.97586	82.10664	4.49688	0.00758	32.73410	1.29144
2112	4421.35412	17.92476	7199.47515	643.62000	0.72425	0.03301	766.03769	0.32032
2113	4640.46988	15.42952	10224.25203	413.11944	4.15113	0.09568	572.27329	0.42372
2114	4146.16497	16.44557	8938.98847	611.26474	0.11735	0.02404	646.37144	0.39686
2115	5122.28370	10.69958	9674.69736	46.84848	-2.75906	0.00045	13.41855	0.67421
2116	4146.04937	12.86657	12604.51826	250.93263	-0.55880	0.00569	339.73269	0.11784
2117	3741.85644	11.73435	7570.23876	765.28059	2.68933	0.02114	725.65156	0.55724
2118	3502.90253	15.39079	11524.48961	363.04193	2.16720	0.09993	246.43594	0.53673
2119	4381.09352	18.72533	8624.59878	475.11759	0.75188	0.03785	492.75259	0.37231
2120	3736.06785	11.63311	8718.39114	636.92208	1.39658	0.02748	624.13619	0.60570
2121	2980.19280	16.72651	16776.07586	429.72046	3.80246	0.24159	359.76636	1.01233
2122	4966.83087	8.63177	9988.15194	277.40594	-0.21273	0.00298	405.73654	0.11271
2123	4281.65366	14.16937	6881.26567	503.70539	-2.16925	0.02065	574.09339	0.45494
2124	4820.63472	20.94554	7791.14347	590.75343	3.05333	0.04099	728.49796	0.42640

2125	3806.41550	23.72457	12165.05685	693.79940	6.49713	0.02026	704.51299	0.05307
2126	4922.04705	19.95333	11513.27885	346.49983	1.50529	0.05327	464.47332	0.40096
2127	3184.04514	15.85839	12260.48320	447.63519	2.88846	0.10817	382.42121	0.72487
2128	3598.92753	13.03408	20134.95467	344.05295	2.07642	0.02019	428.04022	0.34991
2129	4444.87577	20.46257	8267.06719	336.35755	6.67721	0.10757	336.52733	0.56666
2130	5037.07138	13.44613	8725.40969	267.44556	1.42396	0.01329	385.04506	0.21359
2131	3430.09904	8.08738	13631.68523	386.67071	1.01642	0.03121	408.20061	0.44490
2132	4971.15591	10.97643	10203.91255	94.94463	0.18948	0.00282	78.77755	0.27019
2133	4408.31893	22.67180	8506.99941	643.73203	4.35243	0.01762	867.26570	0.29764
2134	4708.29914	15.77015	11397.25753	559.15381	5.08049	0.05508	735.67478	0.40274
2135	3940.99175	20.04980	9121.29308	837.46012	5.93612	0.05987	702.24402	0.71425
2136	2875.93900	16.56258	13985.52861	364.18536	4.38846	0.23618	226.27905	0.73089
2137	4205.61487	24.75366	8178.92461	862.90741	2.70495	0.02705	929.71354	0.42376
2138	3736.99975	12.97337	13648.96506	195.48203	-0.69870	0.00367	235.89862	0.23053
2139	4683.62111	13.64092	9876.41036	394.23106	5.06266	0.02312	487.43169	0.20553
2140	4575.02605	10.42112	9311.91585	519.86038	-2.42636	0.02314	664.63772	0.19396
2141	4147.27027	16.45379	8961.46805	606.50894	0.14504	0.01981	633.95802	0.38698
2142	4511.77581	19.82523	7326.00324	548.48514	2.29942	0.05948	666.06010	0.40712
2143	4425.53810	11.53275	8413.00284	599.38640	-0.83684	0.01242	751.98245	0.21432
2144	4567.80812	22.50831	12957.07197	571.22242	4.79040	0.02703	688.60918	0.43799
2145	4338.95079	16.16667	9293.74541	431.47862	4.97797	0.08242	587.01975	0.44881
2146	3776.67947	9.58458	8277.27805	417.22574	-0.88427	0.04570	374.45664	0.59695
2147	4981.53410	17.69005	8843.39848	548.91874	1.53714	0.02157	730.12733	0.32374
2148	3540.35392	16.74735	17324.86098	466.17085	1.23758	0.14766	430.51564	0.75327
2149	4006.73436	9.89936	9298.26783	315.59559	-1.64401	0.00670	408.50699	0.19920
2150	4778.15902	10.35255	11690.22150	509.27060	-0.88594	0.01039	696.25785	0.14268
2151	3799.90244	24.10805	11033.38175	721.39756	3.14641	0.04220	662.34766	0.83347
2152	4845.19727	15.30824	11084.21577	520.98370	3.23371	0.02666	749.56998	0.32398
2153	4553.85451	22.52865	12732.45572	457.67334	4.83963	0.02672	553.28825	0.38804
2154	3501.06235	9.30905	7966.13129	410.11022	0.67596	0.03861	318.42553	0.48126
2155	4461.83869	20.35488	10202.00468	639.39493	5.36653	0.02117	784.50173	0.29470
2156	3965.42099	22.97658	7862.10517	879.07074	3.04384	0.04374	884.74866	0.52831
2157	4663.32528	18.76768	12264.80634	408.64160	4.93204	0.04459	485.95772	0.35298
2158	2553.36205	15.49721	4097.06923	458.91145	5.70467	0.25318	393.30358	0.80644
2159	4844.54943	15.79364	10223.94333	398.73961	2.70261	0.02885	591.83288	0.26531
2160	4708.60096	15.77358	11409.58557	331.32891	3.39915	0.05041	418.13621	0.39605
2161	4300.07073	15.22135	12145.30826	417.87895	-1.89874	0.01812	492.70240	0.31013
2162	4782.92435	16.52749	9793.50485	595.54510	1.81047	0.04790	750.48833	0.35803
2163	2707.99929	26.11385	11832.31929	850.03523	8.00408	0.17435	585.17606	0.97226
2164	4506.74355	16.69979	8489.52030	621.70484	0.03075	0.03640	728.85736	0.41641
2165	4890.40023	9.34932	10045.29717	445.08411	-1.02782	0.02317	578.27334	0.37508
2166	4578.75746	18.01073	8255.07522	467.97146	2.38108	0.02658	618.45931	0.29832
2167	4912.44614	13.69451	8072.55562	478.85743	2.21383	0.01648	706.52309	0.22580
2168	3428.22765	8.08719	13650.70581	410.42195	1.75959	0.03498	451.21258	0.44255
2169	5076.00354	13.17533	12135.03094	109.34778	-1.65455	0.00127	123.70314	0.33670
2170	4616.14094	18.64014	8333.01292	510.99735	4.47551	0.03235	664.30344	0.35495
2171	5012.11981	6.81665	9331.19158	330.53128	-0.23449	0.00123	500.93312	0.03323
2172	3678.65951	7.66091	5908.01048	421.49383	-1.01732	0.02832	429.63658	0.52671
2173	4690.47334	13.68217	9820.77043	381.50251	2.28616	0.01938	455.87108	0.23888
2174	4525.85872	20.06346	21807.24867	429.33158	4.93910	0.11699	563.44796	0.28965
2175	4146.98937	16.44420	8963.91990	714.47803	-0.21982	0.02188	790.31230	0.38506
2176	4493.18512	20.51039	16024.85279	749.24017	2.74034	0.01221	909.04597	0.27632
2177	3622.44593	13.37781	29858.55853	198.28916	0.42850	0.01631	226.67185	0.28402
2178	3864.66368	24.03251	12306.95321	715.44314	5.73565	0.01644	706.78532	0.07314
2179	4173.57374	23.75159	8379.91333	917.85124	3.07753	0.06316	944.22368	0.59234
2180	4334.67026	17.18183	8153.38826	602.59853	3.41227	0.04409	637.11601	0.40732
2181	3478.21322	13.99819	7338.56831	534.28958	3.07784	0.06627	471.74435	0.58182
2182	4504.61180	16.55154	8920.34974	481.69920	-0.55680	0.02848	564.40446	0.30406
2183	4505.18862	21.13495	9937.61775	486.21872	4.31512	0.06572	600.10838	0.49970
2184	4890.54900	9.35399	10045.21818	464.54702	-2.65674	0.02353	609.44798	0.38631
2185	4056.86030	12.50873	14975.00864	101.12642	-1.99601	0.00284	81.47497	1.38031
2186	3575.15543	13.30359	5278.90256	457.04569	1.40977	0.04379	378.18485	0.54924
2187	4484.80859	20.99981	9228.47729	558.74199	2.81366	0.04368	724.89646	0.39164
2188	4265.69041	16.20169	7764.59589	726.50120	1.67471	0.05185	787.08025	0.45737
2189	4958.20438	6.64033	10869.62028	365.53559	-4.36998	0.00622	516.96848	0.18623
2190	4004.65488	9.84236	9366.09084	261.57697	-2.03720	0.00751	330.00031	0.20694
2191	3181.46599	15.82364	9642.16869	547.34921	3.39105	0.18997	446.89528	0.73600
2192	3502.02024	15.36398	11503.51484	529.80843	2.79567	0.10560	501.51289	0.52628
2193	2568.72942	15.61979	11094.46642	441.33103	5.12845	0.30441	483.18047	0.16353
2194	5003.02752	7.78254	13758.97021	201.32662	-0.43368	0.00187	297.71345	0.08310
2195	3210.20893	20.76233	10261.89958	550.49194	3.20574	0.14941	438.86643	1.12177

2196	3192.29631	18.30921	10651.34144	392.15551	3.11123	0.17710	332.67419	0.79753
2197	3318.43583	14.56930	11569.93891	277.29011	1.82796	0.05883	227.52833	0.62347
2198	4843.81775	12.55119	13053.31891	449.58621	3.18110	0.02237	632.31483	0.29130
2199	4333.57604	17.26355	8154.34534	533.84232	2.58882	0.04124	550.63268	0.36015
2200	3776.08298	12.10091	9407.13676	614.90353	0.34781	0.02941	614.85867	0.49713
2201	2560.12586	14.69780	4134.17681	483.51422	4.67420	0.26472	450.08923	1.61654
2202	4615.80285	18.64422	8337.54378	416.16068	5.17722	0.03663	535.24959	0.35283
2203	4649.53116	22.39532	9734.35131	708.47739	1.91266	0.03355	905.95913	0.44395
2204	4366.31848	18.85911	9569.44136	577.09712	3.55370	0.04657	656.82769	0.40653
2205	4877.40769	16.85978	8588.37576	463.95879	2.12526	0.05765	626.97517	0.40359
2206	4027.96593	25.16077	7278.58110	54.66650	3.24629	0.00272	14.16273	2.03343
2207	3766.91163	11.92629	9287.77706	640.02418	1.81745	0.02996	628.25754	0.56344
2208	4929.61042	7.62598	9067.73339	358.19109	-2.34274	0.00036	546.53868	0.02835
2209	4536.58537	20.24363	24724.38219	409.38766	6.85793	0.07837	548.26754	0.39377
2210	3629.12876	17.58103	17078.97091	282.97378	-0.10042	0.09768	180.80534	0.94042
2211	4946.13583	13.16273	9383.97620	387.26958	4.54474	0.01099	584.41021	0.13772
2212	4979.93002	17.60791	8851.30905	765.31110	0.40423	0.02126	998.47986	0.32204
2213	4972.08744	8.57107	9426.85198	273.28804	-0.40520	0.00283	399.01800	0.11538
2214	4421.21474	16.95555	10255.00549	374.82996	5.45336	0.07063	486.69781	0.60200
2215	2492.90625	14.43211	3701.71851	479.12402	6.14958	0.32035	501.71384	0.67147
2216	4005.14022	9.88347	9297.72467	268.14459	-1.59103	0.00707	299.79377	0.18961
2217	3220.58688	14.54752	10060.52712	384.36611	2.78475	0.09533	415.31110	0.42058
2218	4462.59383	20.98625	9406.93556	535.26636	2.31845	0.04154	695.07751	0.38090
2219	2553.44707	15.10594	4061.31120	487.38720	5.95837	0.24332	468.58609	1.28849
2220	5112.50391	10.95204	14437.26945	153.44263	0.44920	0.00239	211.58311	0.16971
2221	4604.87015	22.17085	10973.71300	580.82774	5.56066	0.09289	703.99789	0.59476
2222	4759.76607	18.20657	10682.41543	644.24868	1.68673	0.03310	824.44546	0.36118
2223	4281.50946	14.17648	6879.76209	530.75012	-1.52570	0.01949	605.38220	0.44536
2224	4043.67802	9.49144	11852.40416	221.71201	-2.12612	0.00334	266.50536	0.20673
2225	3286.62164	18.70850	18759.23168	439.43868	2.05434	0.20763	385.73393	0.86751
2226	4951.99969	6.75607	16789.56022	121.38181	-1.74575	0.00163	147.45942	0.18675
2227	4574.07584	20.72806	16996.46640	570.20282	3.82312	0.09462	734.05983	0.48981
2228	4424.87708	17.39661	10692.65024	694.29313	1.14304	0.02922	799.36103	0.41229
2229	4881.85943	19.76143	11051.21063	388.80176	4.22109	0.07686	515.92700	0.35326
2230	4664.44195	16.57281	17951.33991	335.56962	4.26650	0.08349	446.65100	0.44792
2231	4784.78494	15.47060	7030.62496	319.36789	2.05227	0.01386	458.60202	0.21940
2232	4678.93865	10.86580	16768.16897	118.77359	1.74929	0.00850	125.79102	0.36472
2233	3680.56637	7.62926	5917.34707	392.83056	0.73776	0.02621	390.32528	0.57309
2234	4878.70821	7.75205	10014.32890	413.18409	0.00015	0.00790	549.57767	0.23824
2235	4849.95812	15.82087	8868.72661	343.11056	3.59440	0.02842	506.41386	0.26532
2236	4416.60799	22.69258	8619.62502	612.23859	3.58373	0.01446	810.89859	0.25163
2237	3475.95522	13.94508	7314.89262	540.91056	2.91909	0.06602	498.16277	0.59440
2238	3539.03682	9.39264	7257.90496	706.54396	2.42677	0.04382	693.94063	0.68520
2239	4828.63641	9.59443	7197.21632	156.90853	0.59668	0.00548	197.95187	0.28468
2240	4240.60163	17.39050	7577.94873	717.76101	0.06579	0.02465	810.64434	0.47337
2241	4231.73544	18.87676	6838.07734	848.91169	3.61524	0.05687	875.45887	0.45727
2242	4214.59006	24.73795	8213.90937	770.37427	2.63176	0.02597	891.62155	0.40963
2243	4236.29628	23.42307	12366.98328	731.84941	3.53831	0.01056	848.92111	0.15034
2244	3499.42814	9.28156	7963.34865	473.57590	1.05231	0.03941	438.25016	0.70883
2245	3905.92654	24.69853	10053.80598	932.92748	5.67412	0.01360	903.63538	0.36203
2246	4618.41844	7.79233	16756.24456	117.06277	-3.78911	0.00002	148.02855	0.10537
2247	4847.07744	13.30464	10790.15377	376.03290	2.16206	0.02255	563.87960	0.28340
2248	4381.58336	18.86273	8614.74656	655.40792	2.32467	0.03682	705.19349	0.41638
2249	4910.89590	13.66144	8081.50840	460.43605	2.25269	0.01713	684.62963	0.20308
2250	4536.30363	20.24341	24743.15040	454.22545	4.08451	0.10843	593.05520	0.40312
2251	3669.20778	14.08523	9916.61216	608.69179	2.06285	0.07945	614.80287	0.63883
2252	4758.62896	14.78364	11464.22001	377.29042	2.99670	0.02327	548.67688	0.33818
2253	4371.61755	20.42095	9917.67618	501.86932	3.13603	0.04438	555.99862	0.45220
2254	4380.94527	18.87920	8617.30270	482.15287	2.23772	0.03708	498.00840	0.41726
2255	3488.13854	18.87317	18720.89063	460.19592	-0.16250	0.05060	425.41261	1.75926
2256	3167.40623	19.67256	17766.70495	449.19426	1.74717	0.14634	415.54955	0.75584
2257	4706.05149	11.08721	15915.84827	135.83718	2.21809	0.00451	176.99348	0.22800
2258	4642.36126	22.38177	9739.51694	617.97663	2.12062	0.03601	814.24172	0.48198
2259	3209.69160	20.75822	10260.70831	548.26111	3.55623	0.14821	433.14862	1.06907
2260	4538.62126	20.28555	24747.91783	275.05300	6.65375	0.10205	333.65468	0.40967
2261	4648.15461	20.83938	9257.93896	393.59662	4.27420	0.08947	455.96615	0.49670
2262	4668.27600	20.14822	8177.13821	441.53495	5.26255	0.04740	606.94702	0.24366
2263	3623.05010	12.57029	27155.87393	259.52450	-0.43048	0.01522	264.02159	0.47381
2264	3735.88482	11.60740	8729.50701	589.71304	1.02651	0.02884	594.74060	0.61222
2265	4523.36558	19.93874	7365.02674	619.52436	1.45954	0.04703	773.02452	0.46593
2266	4843.53355	12.62934	14456.87284	374.32375	3.65008	0.02376	533.55377	0.23113

2267	2917.21557	20.02402	8125.65501	449.66519	4.69459	0.28920	293.49129	1.09545
2268	3217.03118	19.25346	13222.83203	438.30056	2.83071	0.19663	338.57086	0.73847
2269	4913.41553	13.69179	8091.81073	452.83433	3.15348	0.01793	667.66054	0.21036
2270	4994.12442	10.08357	9763.64527	199.16708	0.14450	0.00650	239.48023	0.16597
2271	4689.02297	18.22108	16569.84395	353.84722	3.97916	0.03165	481.74514	0.14741
2272	3912.80181	18.35735	7202.00762	702.47769	5.75718	0.06615	636.93671	0.61189
2273	4459.30270	21.78479	7985.44636	612.30719	1.92847	0.03107	789.55161	0.30703
2274	3839.86354	20.22024	6338.72774	522.94226	1.83864	0.02544	472.64238	0.50109
2275	4626.26646	15.30870	10135.19105	241.64312	4.33559	0.10024	300.41832	0.46208
2276	3767.33931	9.58537	8335.79102	588.54276	1.66728	0.06332	596.94479	0.51299
2277	4348.21089	16.70802	12314.62337	53.70085	0.35924	0.00305	9.69202	1.24429
2278	4558.82731	10.08474	17182.36874	65.40432	-1.42833	0.00170	50.78365	1.24453
2279	4792.29671	15.81721	7406.56326	381.29494	3.19935	0.01426	555.38434	0.20452
2280	4687.27807	15.31276	14121.63918	216.06888	4.19605	0.06659	266.36384	0.28212
2281	4635.24726	22.34108	9559.96872	639.85957	3.80924	0.04180	815.32035	0.41880
2282	4544.61896	15.95859	11273.76841	572.02673	4.36769	0.07559	801.16557	0.38472
2283	4521.35269	19.91752	7354.50691	541.68177	1.99794	0.05073	659.64540	0.44442
2284	4367.91231	18.80508	9614.95502	556.01041	3.49941	0.04395	634.87075	0.34891
2285	4056.08184	14.00600	11748.08435	69.15482	-1.27576	0.00446	44.46685	1.10423
2286	3395.02471	11.75100	7582.99252	555.94927	2.85282	0.09168	480.05327	0.78050
2287	2548.68618	14.84254	3991.43081	353.06065	5.91020	0.23551	287.09997	1.17758
2288	4488.37833	20.64069	9765.57184	385.13862	6.00921	0.11157	425.36759	0.46931
2289	5113.04223	10.97702	16233.53444	189.13178	-1.17782	0.00213	283.57290	0.15402
2290	4430.74091	14.67354	6233.95636	599.92626	2.62772	0.02515	680.37392	0.31936
2291	4576.23042	10.21793	9305.15703	440.63735	-3.06523	0.01940	556.99804	0.36654
2292	4399.38970	6.55347	7984.23438	325.71408	-3.30187	0.00270	434.93636	0.10686
2293	4945.78059	13.15915	9463.07811	325.44208	2.74341	0.01027	499.44865	0.19477
2294	3540.57871	9.42314	7235.84937	653.71468	2.65667	0.04008	618.80273	0.63545
2295	3181.32320	18.28091	10440.81766	306.56706	2.92111	0.17558	259.40277	0.77518
2296	4440.31467	20.40649	8241.94808	471.10897	5.02371	0.10641	522.83238	0.56673
2297	4064.52175	9.07004	11363.10831	191.43516	-2.10105	0.00623	254.71570	0.13495
2298	4973.18095	8.59032	9208.60420	335.60040	1.18190	0.00395	495.27439	0.09899
2299	3787.86904	25.39666	6715.27105	67.46029	3.48657	0.00517	20.93260	1.41893
2300	4492.57408	12.54156	9290.02983	535.51245	0.73244	0.02773	638.81799	0.27136
2301	4718.71540	19.28729	9885.60151	608.05466	1.82230	0.03885	770.45635	0.29150
2302	2576.43699	15.03852	10869.38768	442.73315	5.71056	0.28487	379.34271	0.86493
2303	4266.84806	23.21463	11932.93104	712.29160	4.32172	0.00948	840.11757	0.12216
2304	4571.51831	14.12648	21540.63149	58.90769	-2.14048	0.00001	22.55099	0.42020
2305	3319.74184	24.37703	10732.15276	996.15478	10.63274	0.20233	623.90307	1.98974
2306	4672.06173	20.18010	9981.43431	391.20507	3.82837	0.04622	561.38389	0.30062
2307	4552.85135	22.52436	12869.36034	423.30870	3.86390	0.02477	512.82229	0.38509
2308	3380.38795	9.70630	6883.03105	334.61662	1.96024	0.05711	348.64146	0.42920
2309	3735.70919	11.62789	8689.74634	437.38017	-0.16672	0.03541	403.86416	0.57314
2310	4709.89174	15.81172	11396.32165	487.92963	3.89938	0.05736	634.27040	0.38279
2311	4489.99211	21.07904	9223.91692	537.25340	2.36762	0.04284	692.33774	0.37984
2312	3741.72480	11.73277	7572.67139	753.76006	2.61516	0.02528	710.20400	0.55489
2313	4523.43953	19.92920	7366.14864	520.72431	2.41835	0.04794	604.96726	0.44683
2314	4399.57156	6.57315	7883.03213	338.47758	-2.12539	0.00373	444.26917	0.06783
2315	4505.65645	16.69985	8490.81678	605.68868	0.86174	0.03644	713.29187	0.40535
2316	2560.14784	26.14410	11084.02631	823.45403	8.33549	0.18878	527.30692	1.04347
2317	2895.74311	16.39385	14643.75256	406.72788	4.50985	0.18936	393.54951	0.64186
2318	3064.14298	19.43251	10779.70673	450.41161	3.83470	0.12800	262.27308	1.06714
2319	4769.35189	14.71707	11081.30272	319.44230	2.82784	0.01889	448.59550	0.38273
2320	3570.38694	17.65714	7353.40864	444.80305	0.04659	0.09118	425.26334	0.80184
2321	4896.58942	12.81119	7280.62837	282.45856	3.50568	0.04038	368.19690	0.31454
2322	4945.22398	7.28703	9825.85661	327.40253	-4.28876	0.00026	476.35219	0.03503
2323	4570.42587	17.91363	8313.23907	412.94949	2.35154	0.02736	556.01342	0.31716
2324	4907.85099	13.57536	8051.08201	396.00113	4.28181	0.01842	583.82797	0.20750
2325	3542.66677	16.76458	17496.58529	359.70997	0.74980	0.15304	275.71435	0.63320
2326	4877.53021	7.73615	9911.58562	430.34132	-0.64508	0.00808	574.45229	0.22916
2327	2979.67433	16.89590	15479.82995	458.96374	2.69020	0.14377	484.34965	0.85011
2328	5181.96479	9.96667	15815.18401	46.88100	-4.21483	0.00023	29.88768	1.45204
2329	4517.52604	20.87704	11724.61909	652.05207	4.48092	0.01477	763.48675	0.23899
2330	3884.18964	23.97063	12183.99943	599.84641	7.91488	0.01943	646.69004	0.05799
2331	2930.21673	20.06990	8221.08549	513.22833	4.33829	0.28411	401.30152	1.04717
2332	4674.71880	18.89124	12413.95168	509.70584	3.73149	0.04119	639.37819	0.38241
2333	4614.22356	22.37839	8688.31091	627.85892	2.73089	0.04172	766.28723	0.43435
2334	4613.09853	18.87283	8420.45057	305.55920	5.40728	0.03641	371.39085	0.30398
2335	3506.65097	15.35308	11550.17778	463.40619	2.81878	0.11033	399.45626	0.59151
2336	4451.33284	20.09941	13475.27340	513.89087	4.94240	0.10609	619.29349	0.32361
2337	3752.37395	12.38982	6473.90252	448.32246	-1.53095	0.01422	526.82384	0.41641

2338	2572.97377	15.17121	10598.04979	326.89285	6.02822	0.28122	244.87358	0.76759
2339	4789.87722	15.70302	7278.79148	476.63990	3.03255	0.01439	693.98971	0.21313
2340	4555.20157	22.52971	12740.43053	530.47270	5.24331	0.02710	651.05365	0.38624
2341	3905.26069	24.70289	10050.95898	914.37452	6.99403	0.01279	923.54458	0.36423
2342	4940.98818	13.04782	9533.94375	372.12149	2.01757	0.00959	553.08730	0.17748
2343	4572.91502	20.66338	17017.83625	385.62282	6.00379	0.09485	477.61786	0.49001
2344	4492.62260	12.53914	9304.27044	645.89053	0.02298	0.02917	777.09794	0.25263
2345	4806.39800	22.31979	10457.32026	589.09566	3.41735	0.01584	777.49937	0.25877
2346	3539.46534	17.33352	8060.46143	452.37818	-0.90552	0.04188	468.11262	0.61948
2347	4144.80520	12.91683	12557.99318	228.19979	-0.49088	0.00811	286.62323	0.17198
2348	4981.78530	17.73091	8858.37563	565.89575	1.46040	0.02389	748.93448	0.31833
2349	4778.49433	10.36964	11692.87169	615.05262	-1.07297	0.01114	819.94805	0.14824
2350	3539.54678	17.33288	8062.76921	405.35292	-0.53511	0.04202	403.08860	0.61202
2351	3619.62345	17.59129	17180.48996	452.71769	-0.24574	0.09845	430.12114	0.90948
2352	4688.69342	15.32519	14186.91283	401.07285	4.56841	0.06786	569.87787	0.27789
2353	4341.64453	16.17648	9362.05572	508.49379	4.91448	0.10301	694.65578	0.46736
2354	4256.07303	23.32831	12451.53786	699.75934	5.15433	0.01023	871.60977	0.12075
2355	3150.89202	19.33146	8141.58360	462.65871	2.72569	0.15484	321.71808	1.92556
2356	3221.17302	14.53024	10090.34008	464.40908	3.77638	0.09251	502.17702	0.45204
2357	3887.25842	13.45029	10967.63515	391.76864	-1.55580	0.03310	420.50767	0.50178
2358	3741.40949	11.72788	7562.94924	691.74896	2.49333	0.02269	665.17122	0.50950
2359	3193.34988	16.68929	7063.12492	334.43626	2.27649	0.10003	240.72861	0.63783
2360	4009.01546	23.17324	9971.53989	69.22334	4.43186	0.00422	30.33977	1.71795
2361	4852.67867	15.84567	8375.38715	413.15571	4.52618	0.03178	611.28100	0.18917
2362	3092.13341	19.64411	10588.83214	595.66850	3.35984	0.12845	473.13054	1.19788
2363	4709.08946	19.23042	12614.47125	480.63671	4.76958	0.08425	641.68658	0.57729
2364	5023.91388	18.26233	9242.57082	526.72227	1.60355	0.01770	756.98621	0.25443
2365	3174.33853	15.77323	12167.10007	289.08908	3.26414	0.10154	230.24096	0.71886
2366	3180.17942	15.86150	12249.90560	374.42247	3.10748	0.10338	315.26639	0.79293
2367	4569.85338	18.01702	8215.96145	391.71705	2.46775	0.03078	500.66095	0.26438
2368	4875.71934	7.72722	9706.54326	348.95454	1.09177	0.01026	471.88351	0.23288
2369	4637.56642	16.97925	10106.87475	247.94453	4.19603	0.05962	314.86220	0.53112
2370	3767.88802	9.58183	8372.91500	347.04421	-0.00323	0.05596	287.26528	0.58372
2371	4576.73524	7.80929	8879.77550	216.69128	-3.73853	0.00471	266.02185	0.15010
2372	5009.31037	9.93614	9447.27570	210.37487	0.71253	0.00441	294.56539	0.16765
2373	3743.03816	11.77840	7599.20011	769.40670	2.33022	0.02272	748.88998	0.54617
2374	4230.50869	18.87032	6830.24454	744.76319	2.88389	0.05487	829.41883	0.56790
2375	4785.89607	22.27319	10653.61988	524.60485	4.28767	0.05680	664.38810	0.50720
2376	3522.54918	17.28263	7926.65029	490.63461	1.17118	0.06679	490.26123	0.59651
2377	4795.69016	10.39292	11111.03173	543.57233	0.42230	0.02794	697.24941	0.44222
2378	4196.14291	23.81202	8462.41836	797.87280	2.12196	0.05297	896.27475	0.57816
2379	4749.72287	21.54992	20048.10232	510.59582	5.09915	0.03561	651.22424	0.37788
2380	4444.59187	20.51625	8239.87594	454.07506	5.95098	0.09425	490.93032	0.55360
2381	4605.33980	18.85638	8411.77144	494.28475	4.71984	0.04054	625.39269	0.31893
2382	4670.21450	16.61954	17902.28000	392.95574	4.41153	0.08858	537.62920	0.47539
2383	4175.88682	18.95136	8235.53220	746.34515	1.63426	0.03364	811.20759	0.56282
2384	4619.29351	18.62303	8321.95529	350.81916	3.47536	0.03338	438.25908	0.37527
2385	4510.38132	19.82187	7299.96719	558.27874	2.06289	0.05944	666.76148	0.43814
2386	4740.82899	21.70112	10172.84986	430.45502	4.70510	0.07555	513.05570	0.42526
2387	4896.96286	9.56913	10169.05837	367.45846	-0.43109	0.02916	453.78717	0.34880
2388	4498.20465	21.04620	9879.34492	489.25758	5.92628	0.08487	577.07088	0.50986
2389	4931.49932	7.62264	9218.30312	324.98228	-3.84398	0.00024	491.37061	0.02925
2390	4850.05870	13.26075	10596.25245	345.68920	1.42079	0.02250	517.08000	0.29878
2391	4899.00481	13.45624	8196.90874	347.01357	2.01996	0.01569	503.29346	0.24022
2392	4146.97162	16.43009	8916.06468	764.03643	1.22769	0.02579	818.17659	0.44664
2393	4381.13529	18.73002	8624.11864	651.66346	1.83635	0.03861	713.01879	0.38465
2394	2895.01534	16.57986	14318.39627	451.62595	4.42991	0.23408	426.17733	0.69950
2395	3766.98512	11.92333	9258.83533	712.22826	2.57361	0.03376	726.16178	0.60404
2396	3474.57662	13.92075	7297.42779	418.65001	2.10425	0.06365	317.52335	0.57161
2397	4875.79050	7.72743	9708.68399	349.02075	0.15442	0.01038	475.95755	0.22001
2398	3652.57488	23.85988	10476.78522	1029.32192	6.88498	0.06278	813.40462	1.17210
2399	3475.51852	13.94620	7309.52762	499.84124	2.18195	0.06382	426.74400	0.58741
2400	4417.26408	17.83413	7199.95331	582.33561	2.02822	0.03017	688.03344	0.32691
2401	3552.13937	23.36311	9232.58340	927.19153	7.39240	0.07054	693.84669	1.28559
2402	4464.68212	21.78155	7679.60677	494.74691	3.03225	0.02853	628.28901	0.33545
2403	3860.80096	24.40950	6378.66870	713.25268	2.46288	0.01842	669.25372	0.72473
2404	3705.93793	24.56108	6212.28491	534.62940	3.19062	0.03548	438.24689	0.49043
2405	4489.61198	21.03714	9251.18791	480.54728	3.15765	0.04400	616.80626	0.38087
2406	4264.58453	23.23654	11954.25751	950.31740	4.77386	0.00959	1113.35708	0.12572
2407	3361.45546	20.30847	10085.67210	150.76797	3.54868	0.01169	131.04059	1.08971
2408	4413.61264	22.71296	8343.66490	477.56670	2.51187	0.01464	621.92101	0.30532

2409	3372.17850	20.38693	10387.82253	159.56155	4.25075	0.01883	150.78900	0.92394
2410	4633.07048	15.36718	10142.18954	407.88029	4.26736	0.08986	568.55506	0.45270
2411	4784.33507	15.47568	7009.52155	346.26074	2.56088	0.01348	501.48592	0.22758
2412	3172.90197	20.08160	10396.12892	693.77722	4.12558	0.14077	551.36092	1.15902
2413	2897.94119	15.89189	15635.55889	347.10115	4.06247	0.21618	312.58458	0.83782
2414	4611.60765	22.34362	8663.49748	613.83320	3.40946	0.04561	734.30581	0.42974
2415	4774.13849	10.19649	11619.57630	391.31204	-2.78051	0.00774	526.13662	0.19390
2416	2500.98522	14.41044	3911.77752	478.29619	5.60595	0.33880	536.80583	0.74801
2417	4469.87307	20.42886	13696.53065	559.88728	4.29939	0.10280	697.32300	0.47409
2418	4899.53955	16.87820	8794.57257	383.05073	2.72495	0.04424	495.50858	0.42415
2419	4421.78260	22.65797	8643.88636	586.21884	4.22755	0.01477	766.66372	0.29089
2420	2975.83349	24.93394	7153.81656	710.43798	6.52097	0.17022	505.43450	0.79482
2421	4419.15639	17.91608	7188.46911	568.82503	2.50443	0.03981	655.43708	0.38244
2422	2903.94553	15.87500	15715.69599	392.72091	3.82308	0.21779	361.49159	0.87477
2423	4490.56814	20.50035	16588.29640	920.98014	3.33276	0.01350	1060.06280	0.28179
2424	3609.51492	17.18085	17381.76555	373.41501	-0.42838	0.10778	311.92248	0.95837
2425	3797.08450	24.11245	11009.76178	789.26823	3.11735	0.04007	760.18998	0.83960
2426	3564.11424	17.59224	7356.07308	545.46309	0.22698	0.10102	561.32602	0.84313
2427	4578.12394	20.70739	17344.43853	565.08100	5.05653	0.09246	742.23361	0.48386
2428	4243.83787	23.32789	12188.20586	683.78288	6.54778	0.01366	824.86344	0.12599
2429	4649.28703	22.36797	9744.65632	557.23787	3.01914	0.03473	692.43945	0.47462
2430	3142.35246	17.17986	9512.65248	594.56290	3.93496	0.15494	531.13067	0.66326
2431	4780.96173	10.44815	11863.81954	440.57171	-1.72065	0.00831	596.86741	0.11130
2432	4702.65555	10.26767	13948.94809	56.06254	4.85227	0.00389	15.25001	0.29765
2433	4162.49023	12.47470	12399.08091	237.37259	-1.79262	0.00456	294.91756	0.29197
2434	4704.65741	11.08687	15905.57851	145.76008	2.79944	0.00481	182.38309	0.19974
2435	4335.71820	19.37092	6377.94044	700.28985	2.07929	0.05823	776.04489	0.39302
2436	3097.41172	20.07746	10493.25260	469.00747	3.28162	0.17379	339.42594	0.99540
2437	4686.35592	21.33325	17793.47839	550.55373	4.32061	0.06853	690.29924	0.59599
2438	4929.56699	7.62732	8937.56662	342.71817	-1.32781	0.00051	501.37634	0.03411
2439	4952.00846	10.71879	10113.05189	146.46320	1.25805	0.00314	187.06598	0.28448
2440	3576.04880	13.32512	5244.81627	640.80081	1.55594	0.03551	585.26886	0.69465
2441	4427.34512	17.36409	10707.02247	637.15871	2.42338	0.02868	692.77772	0.41388
2442	4419.54760	15.24468	23864.01145	70.30253	-2.78828	0.00023	41.64745	0.26370
2443	3506.97222	15.35279	11615.47619	455.29434	1.71753	0.08760	414.92244	0.43215
2444	4598.92174	25.07693	8188.24516	43.88188	0.31195	0.00097	14.18037	2.01416
2445	4762.03697	21.57639	19683.07992	481.35059	4.35666	0.03718	614.92507	0.28683
2446	3767.41716	11.92585	9282.85593	689.92312	1.09466	0.03053	706.54027	0.64881
2447	4240.72963	17.37999	7592.59369	658.78782	0.51771	0.02250	763.87931	0.50667
2448	3908.93182	12.93124	12001.44030	403.19404	1.64533	0.04008	427.17988	0.50565
2449	4343.46965	16.21338	9349.60584	408.51094	5.55857	0.09094	549.78486	0.46720
2450	3365.93016	19.17410	18706.27628	424.92969	2.23002	0.10476	360.69760	1.07085
2451	3383.59853	7.69242	13549.10841	322.51751	1.10456	0.03015	266.16120	0.56644
2452	4608.47419	18.85667	7935.04630	415.13047	4.58574	0.03952	537.70796	0.25390
2453	4007.07258	17.12737	5809.15510	408.01142	-3.67169	0.02665	463.82779	0.81256
2454	3776.83832	9.59434	8278.82283	445.95834	-1.27283	0.04637	419.30506	0.60135
2455	4341.35652	16.17433	9326.99217	337.44106	5.83072	0.08426	443.50784	0.44091
2456	5021.05962	13.81835	8449.28651	360.52913	2.75468	0.01445	542.57138	0.20487
2457	4674.29247	18.89200	12412.61680	509.96200	4.50185	0.03858	639.42912	0.38472
2458	4909.76035	13.57860	8091.17503	409.98286	1.98749	0.01560	596.61494	0.22501
2459	4244.43793	17.30999	7628.18620	713.81311	-0.82295	0.02073	809.12795	0.52046
2460	3151.37805	18.29095	10435.46279	398.63515	3.62740	0.18004	333.27823	0.79731
2461	3242.08532	18.34578	18280.15887	346.18645	2.98914	0.19537	193.64059	1.12144
2462	3822.32864	23.79450	12076.35829	718.48141	7.71053	0.02173	697.38553	0.06153
2463	4901.79467	9.90342	8171.98688	115.28243	1.09801	0.00530	123.56869	0.20771
2464	2784.91741	14.48007	13556.59802	407.47715	5.02125	0.25267	323.78558	0.92154
2465	3664.29370	21.30048	13459.65924	103.31484	3.57291	0.01634	53.38885	0.82673
2466	4961.13105	8.66482	9381.50438	223.07051	0.00573	0.00293	311.14344	0.12711
2467	4753.96640	8.35917	9943.36377	298.83451	-3.89181	0.00311	410.44613	0.10482
2468	4764.91390	18.34651	10677.73075	598.58531	0.90705	0.04040	779.33179	0.32382
2469	4651.98808	22.42020	9640.70799	625.94079	2.14905	0.03373	801.58640	0.43252
2470	3575.27493	13.32872	5141.11501	636.01359	2.62454	0.04008	569.49242	0.74168
2471	4505.02302	19.76664	7307.37169	540.58520	2.73464	0.06124	654.01021	0.42931
2472	4606.82395	18.93924	8434.84959	496.45125	4.63613	0.03880	643.44418	0.31410
2473	4749.20879	14.79637	9636.66699	328.69495	2.49241	0.05788	447.30500	0.58290
2474	4709.16237	19.22977	12614.45669	440.37624	4.76911	0.08557	585.08676	0.58201
2475	4439.38152	20.44412	8193.33260	533.59183	4.13713	0.09203	623.20556	0.43439
2476	2525.98128	26.32029	10833.05959	532.91259	8.57968	0.18956	230.67946	1.39103
2477	4885.63108	9.31646	12567.23554	328.22340	1.47887	0.01583	479.40811	0.27396
2478	4032.98361	13.09092	15554.25822	123.61030	-1.95150	0.00254	124.90754	0.57163
2479	5022.75006	18.25443	10075.11387	206.85187	2.45734	0.01867	268.40119	0.17692

2480	4575.96533	7.76079	9006.60427	304.17966	-2.92329	0.00388	411.30607	0.11343
2481	2549.43188	26.38441	11329.73485	507.58176	8.82931	0.19703	228.34261	1.42612
2482	3898.41942	24.64831	10005.40640	876.53717	7.54049	0.01522	841.35243	0.27614
2483	4244.50583	17.30521	7629.75981	579.14389	-0.48239	0.02146	652.46164	0.53669
2484	4668.75017	20.13924	8192.00807	391.32759	5.02332	0.04744	529.80068	0.29659
2485	5002.97705	7.77945	14891.02438	172.12404	-0.55687	0.00190	244.74680	0.08606
2486	4252.77871	23.26290	13467.33839	885.39433	2.97565	0.01041	1051.18510	0.13325
2487	4574.00572	7.98626	8891.51929	291.03494	-3.37442	0.00538	386.34893	0.17298
2488	3608.80637	13.27101	20219.03065	316.48586	1.22062	0.02252	387.69954	0.35625
2489	2463.34783	13.74069	4282.81968	385.57419	5.82074	0.28313	383.60259	0.67949
2490	4513.95818	19.81663	7361.70516	628.57180	1.36680	0.04454	766.18528	0.45264
2491	3735.99698	11.49850	8795.09195	489.91217	-0.28097	0.03181	456.76205	0.60589
2492	3916.88369	12.49537	12350.44584	187.95956	-0.74818	0.00962	197.84459	0.52142
2493	3872.32283	23.94983	12156.89968	690.98935	8.22174	0.02262	773.74855	0.05473
2494	4688.36442	13.77096	9709.36217	447.84494	2.93056	0.02103	547.03538	0.23117
2495	4848.64892	12.79144	13344.08020	387.04191	4.44241	0.02562	542.76151	0.21153
2496	3128.21179	19.65301	10495.17223	611.70021	2.95357	0.13349	440.86514	1.23441
2497	5020.02830	13.79711	8488.82256	390.11545	2.78492	0.01786	572.47665	0.16886
2498	3944.84918	20.04726	9126.50811	678.11235	6.89834	0.06028	529.89103	0.71823
2499	4712.38163	15.82544	11104.20421	429.64158	5.36960	0.05746	566.66266	0.30472
2500	5112.91293	10.97733	14650.01519	147.32210	1.68007	0.00293	191.74697	0.09865
2501	3947.42221	20.27787	11864.87082	106.15620	3.09873	0.01435	71.89549	0.96922
2502	4070.05998	25.69407	8963.45949	749.87674	2.88766	0.01264	772.52168	0.39332
2503	4714.35492	15.85305	11380.31004	426.79727	5.80164	0.04873	571.26234	0.37335
2504	4691.97380	15.39035	14148.05890	468.26144	3.72452	0.06450	662.87096	0.34815
2505	4128.02248	12.79202	12669.64910	373.14687	0.16213	0.00988	495.54166	0.21002
2506	4795.63601	10.38892	11106.24851	613.96277	0.55744	0.02683	790.52962	0.42027
2507	3902.33130	14.35872	18606.97725	146.27329	-0.55332	0.00446	146.02528	0.53876
2508	4856.13409	13.76462	12127.04988	343.63771	1.24985	0.03333	414.44671	0.46864
2509	5012.36080	6.81914	8863.33646	279.03216	-0.70833	0.00126	416.40752	0.03298
2510	4290.91679	18.12631	6896.94511	642.14824	2.27610	0.05582	703.70658	0.43073
2511	4756.12139	14.73119	11416.92047	430.94073	2.94697	0.02378	621.28363	0.33966
2512	3435.88173	8.15427	13753.86287	405.98810	1.25840	0.03277	442.03766	0.41794
2513	3830.57282	13.84848	18717.14834	174.23228	-0.30392	0.00344	194.92027	0.44436
2514	4842.86022	12.64716	14469.37843	317.00366	3.50471	0.02571	437.08362	0.24066
2515	2573.59478	15.52303	11045.00439	441.99722	4.84845	0.30747	437.56788	0.79534
2516	4875.76681	7.72794	9707.70011	347.20399	0.79721	0.00956	475.41151	0.23706
2517	4753.38928	21.57754	20075.45621	468.24166	4.73181	0.03191	611.18667	0.33940
2518	4845.85684	12.74376	15168.52240	424.17919	3.37390	0.02443	593.45297	0.32729
2519	4829.46836	14.35347	10773.22765	289.75749	3.11145	0.03383	430.50777	0.19777
2520	4637.27978	20.74604	9172.86095	403.40229	4.73810	0.07780	460.23082	0.52522
2521	3522.82878	17.29891	7878.62431	515.79001	0.25123	0.05833	562.23107	0.59543
2522	5112.82009	10.95854	14085.73426	127.32624	-0.31472	0.00254	157.66566	0.14335
2523	3919.84650	18.57142	6921.82489	799.43640	6.58752	0.05731	734.70787	0.63664
2524	3775.32285	24.17441	10915.42779	722.68312	3.09229	0.04732	650.35937	0.77924
2525	4573.70047	9.82702	17282.00968	69.56575	-3.21467	0.00264	59.28338	1.21091
2526	4613.15056	7.61877	10867.64172	86.12477	-3.37407	0.00042	89.77667	0.90320
2527	3703.91365	7.83782	6097.45097	303.04648	-1.92111	0.02104	277.95176	0.52116
2528	3576.53133	23.27185	9359.07408	1251.55924	8.90144	0.07373	1004.99600	1.29448
2529	4367.05910	18.89316	9561.18132	541.36093	3.31991	0.04501	611.10897	0.38672
2530	4612.02963	22.34859	8671.73784	567.71734	3.25660	0.04806	680.00318	0.42686
2531	3800.31339	19.95559	11684.55905	465.66124	-1.72533	0.07955	474.52069	0.86834
2532	3539.50459	9.35704	7250.58792	626.87192	3.24628	0.04628	576.66521	0.58600
2533	3241.01694	18.21821	18154.97397	476.77802	3.08049	0.21263	411.38522	1.09856
2534	3134.90563	15.57934	6707.46701	312.63951	1.45072	0.01415	259.90228	0.19066
2535	4005.94226	9.86276	9376.61962	332.23380	-2.18481	0.00727	419.43868	0.20240
2536	3703.52891	7.83997	6095.24412	439.74867	-0.75609	0.02346	470.04011	0.46691
2537	4634.75663	20.74429	9153.52050	602.57753	3.00690	0.07632	744.49194	0.51253
2538	4737.87504	15.91440	12186.75124	413.37612	3.51237	0.04722	571.40327	0.42244
2539	3768.53121	9.57247	8322.75677	337.38892	-0.56154	0.05229	297.00459	0.59092
2540	4504.91907	16.73532	8478.04796	546.57568	-0.99753	0.03096	652.29929	0.29050
2541	4090.18472	18.97506	6760.05877	681.04714	3.85582	0.06363	673.08929	0.61752
2542	2875.52337	16.59796	13976.50490	437.37981	4.74558	0.23627	384.93395	0.74452
2543	4769.86189	21.59470	19741.70132	550.76864	3.56206	0.03666	726.90524	0.26648
2544	3802.76532	23.72086	12054.08030	808.71997	7.09737	0.02365	813.09757	0.05350
2545	4785.44719	15.63505	6999.53576	467.38174	3.12151	0.01476	674.67605	0.19204
2546	3791.82304	24.13686	10976.05328	718.11460	2.63938	0.04195	597.06489	0.80789
2547	4576.02437	10.21659	9304.07890	399.44803	-3.09292	0.01995	495.84720	0.18377
2548	4240.29094	17.38555	7589.21471	668.00691	0.41821	0.02217	763.48779	0.51333
2549	2897.15906	19.79402	7736.52795	605.69048	4.18460	0.26913	419.12613	1.08835
2550	4514.26811	19.82415	7361.20145	498.15825	0.31712	0.04748	601.51067	0.45548

2551	4237.20535	23.41855	12384.66172	860.39858	3.46502	0.01111	980.70903	0.15863
2552	4763.99326	18.37540	10640.25999	499.02880	1.88958	0.04596	634.51325	0.32283
2553	4769.99630	21.64556	20259.61830	619.03293	4.12295	0.03534	809.98848	0.33886
2554	4197.53506	17.11793	14560.55823	67.36537	1.15140	0.00812	25.46749	1.57160
2555	3934.28158	20.26411	12144.87788	98.77237	1.78983	0.01362	63.25311	0.94262
2556	4636.65486	15.34586	10140.16339	514.54145	3.58170	0.09965	724.16796	0.41597
2557	4575.01862	10.41928	9311.76559	410.55690	-1.58198	0.02389	485.03932	0.19710
2558	3626.43511	23.25162	5141.12630	525.66970	8.07503	0.07496	470.18167	0.51054
2559	3860.35515	23.88125	12071.71950	811.41708	7.69357	0.01967	817.63460	0.06402
2560	3218.48294	16.52629	12226.09801	382.77160	2.57401	0.08118	314.03953	0.77355
2561	4314.90399	21.89128	8572.21123	818.53973	2.14383	0.03338	822.24464	0.53639
2562	3692.46561	14.11167	10407.30269	481.13613	-0.77947	0.05449	478.86143	0.69245
2563	5113.44050	11.74621	10134.30419	48.60848	-1.85430	0.00046	18.98529	0.46755
2564	4660.22374	19.52318	12317.07356	425.19904	6.41059	0.10786	568.72445	0.42397
2565	4072.32442	25.68966	8973.21817	673.98942	3.12422	0.01063	699.03939	0.44753
2566	3610.10798	13.22942	20578.26835	342.39884	0.86924	0.01754	436.64247	0.26110
2567	4746.04733	21.52999	19989.53127	593.97773	3.73773	0.03389	753.32948	0.35797
2568	4975.64823	10.29507	8743.99288	305.23422	1.64425	0.00449	459.28615	0.17122
2569	4463.68807	21.74975	7683.78039	464.27691	3.26046	0.02883	594.48927	0.33576
2570	3487.65280	13.77723	7413.86809	520.37466	0.98806	0.05164	478.40284	0.71800
2571	4728.76300	18.49122	8905.06103	62.44252	-0.76884	0.00122	49.51163	1.60913
2572	2491.79896	14.33901	3870.91876	396.43558	5.89791	0.31236	400.54010	0.60776
2573	4969.25874	9.91475	8502.82312	383.53392	1.42510	0.00901	545.05122	0.14224
2574	4185.89715	23.77406	8408.43590	744.50787	3.24385	0.06148	808.84242	0.55489
2575	4526.75520	25.36761	9140.34528	45.60275	2.34273	0.00121	11.49701	1.31656
2576	4497.34535	12.63604	9343.80755	514.93104	0.14056	0.02340	619.34804	0.32481
2577	4784.25668	15.47689	7007.50424	408.06000	2.83853	0.01394	592.15892	0.22397
2578	4428.22911	17.35440	10709.46852	773.03334	2.25539	0.02955	841.24939	0.37969
2579	4813.90005	20.77453	7721.75782	659.53752	3.08030	0.05438	823.76767	0.38776
2580	3502.78848	15.32912	11563.18775	345.22174	1.58390	0.08930	279.17820	0.41956
2581	4260.30637	23.25508	11972.61544	671.44900	3.94612	0.00885	802.64800	0.12928
2582	4576.25828	10.23522	9305.74796	434.11415	-2.41660	0.01848	554.63416	0.20394
2583	4851.37426	15.83576	8853.66389	422.49872	3.50514	0.02941	627.63577	0.25535
2584	4650.08810	20.88659	9238.63844	554.15709	3.93802	0.09040	673.48734	0.50170
2585	3766.22286	11.90091	9278.58687	670.16812	1.57571	0.03144	679.50068	0.65819
2586	3515.77054	9.35028	8271.69436	437.81779	-0.84330	0.02808	374.52364	0.45426
2587	2900.11741	16.52244	14687.38129	321.99625	4.28066	0.18909	228.05325	0.71422
2588	4006.92796	9.90979	9415.20779	324.24474	-2.66505	0.00885	380.88287	0.16740
2589	4365.88627	18.84966	9565.36612	542.51516	3.36487	0.04736	613.06977	0.38819
2590	3195.95527	16.73710	7078.84995	385.20401	1.27529	0.08381	302.50522	0.68137
2591	4335.60410	18.30166	6879.89378	607.46485	3.83512	0.03039	663.90861	0.52477
2592	4062.63730	9.14303	11572.98824	170.79341	-1.36115	0.00542	227.48560	0.11589
2593	4648.02429	22.38144	9669.78643	622.41289	2.69822	0.03487	785.02286	0.49034
2594	3862.12399	23.85412	7247.58366	537.25594	6.02953	0.06398	562.56526	0.44516
2595	4918.00313	10.76280	8765.14864	181.30068	1.90565	0.00518	249.39180	0.10486
2596	3914.43788	12.95193	12059.44888	426.35882	0.08489	0.03526	502.40123	0.44301
2597	4607.32961	22.28785	8650.78942	517.80802	0.64644	0.04099	648.68983	0.38318
2598	4831.53766	14.36273	11013.05148	379.36811	2.74384	0.03072	570.13280	0.21026
2599	3930.28229	18.58929	7283.75961	539.06578	5.57427	0.05753	451.45934	0.63920
2600	3475.67046	13.91511	7315.33680	486.62121	2.29844	0.05636	404.36500	0.59677
2601	4503.25281	16.72430	8462.66779	495.50309	-0.55798	0.02696	595.51554	0.28019
2602	4004.12499	9.96480	9308.05408	367.67713	-1.74418	0.01150	454.56809	0.16176
2603	4692.26158	15.38905	14144.31537	409.08866	3.79224	0.05974	574.58028	0.35236
2604	2447.28425	13.76738	3906.96748	379.90355	6.47696	0.26611	447.75066	0.65272
2605	4371.76848	20.42120	9908.84743	520.07371	2.70418	0.04904	567.19204	0.43566
2606	4547.46873	20.96336	12103.06340	623.41357	2.39362	0.01177	749.79947	0.24434
2607	4440.36773	15.62990	24380.38312	89.60561	-0.98996	0.00046	67.91999	0.36093
2608	4087.39611	22.33533	7817.82074	67.61424	3.95503	0.00322	37.51684	1.78343
2609	4897.26616	12.82575	7285.99626	486.27075	2.38757	0.04052	665.59432	0.32029
2610	4975.31406	10.28355	8740.32796	275.76310	2.14842	0.00419	424.15856	0.16250
2611	3436.28344	8.16375	13754.93714	315.50473	1.17182	0.03427	308.54313	0.36404
2612	3736.07286	11.64470	8704.50719	612.75981	2.22007	0.03413	618.46374	0.54071
2613	4380.86334	18.86784	8603.63094	551.63004	2.13583	0.04043	605.08416	0.42354
2614	4581.40914	18.00644	8193.76254	433.01255	1.93979	0.02587	569.91039	0.29372
2615	4265.43388	16.21725	7762.58080	637.96835	1.94293	0.05111	695.47966	0.46085
2616	4462.41437	21.00627	9400.09183	660.98325	2.85231	0.04380	845.73116	0.37443
2617	4628.28352	15.31576	8228.27739	396.68977	4.71673	0.10188	550.03262	0.46508
2618	4254.73629	18.97590	7159.28960	721.87713	3.06157	0.04148	763.52049	0.46348
2619	3516.66160	9.37671	8292.17795	383.70972	-1.44402	0.02863	305.64669	0.46825
2620	4827.98459	14.30757	10785.71110	372.76958	3.03843	0.03183	561.60415	0.20199
2621	4640.38000	20.15072	8045.89668	321.96179	4.09629	0.04221	437.78877	0.33692

2622	5021.78693	18.22708	10073.63431	410.55967	2.60347	0.01787	600.61296	0.18504
2623	3631.94205	23.26975	5163.49855	532.46002	8.40591	0.08771	490.50805	0.39965
2624	4851.34555	13.64115	11906.89191	472.63243	2.16107	0.03826	596.26684	0.49095
2625	4337.29415	19.39587	6380.76292	610.79055	1.58681	0.04875	678.99595	0.42629
2626	4503.91149	16.67514	8873.72064	616.95628	0.23387	0.03867	738.35961	0.43918
2627	3375.61567	20.19893	10613.36478	175.43676	5.09575	0.01841	165.44814	1.00337
2628	4145.83067	16.45448	8949.71399	632.34096	0.26478	0.02176	706.99679	0.37423
2629	4940.77081	13.03424	9346.90700	296.47570	0.98867	0.00958	435.24645	0.18605
2630	4690.01697	15.36397	14132.05787	434.65197	4.19450	0.06168	615.94140	0.28149
2631	3581.84441	13.19236	5368.07331	504.38362	0.71925	0.04299	453.29761	0.56952
2632	4565.49226	20.60717	17836.00346	425.21333	6.80507	0.07713	547.45857	0.48105
2633	3843.97898	20.19938	6352.71338	590.80696	2.30184	0.02403	579.38715	0.53535
2634	3627.76754	23.26217	5169.00105	587.78576	7.53021	0.07461	605.27194	0.47065
2635	4941.28777	13.05019	9535.91664	303.96123	1.62549	0.00928	448.08600	0.17458
2636	4468.96504	22.78234	7303.17271	312.25406	6.84093	0.12796	310.64707	0.71040
2637	4410.51747	22.75563	8381.22160	535.83305	4.02581	0.01496	716.00896	0.29640
2638	3641.01860	12.69026	22454.38984	239.90200	0.36703	0.02222	238.13163	0.47860
2639	4669.82188	16.59335	17879.79838	265.57340	4.47000	0.08754	349.93500	0.46873
2640	2916.12146	20.11416	8036.39341	672.63095	5.52665	0.28132	540.76782	1.00136
2641	4922.96226	19.96020	11508.62992	280.15028	1.74775	0.05330	360.31475	0.39807
2642	4497.05542	21.28612	8795.02955	644.04450	4.61686	0.07967	739.59403	0.61940
2643	4968.46816	9.88004	8898.53500	377.93653	0.49806	0.00786	538.59806	0.14385
2644	4774.23677	10.19693	11719.84673	468.95452	-1.98871	0.00758	633.91214	0.19163
2645	4230.85044	18.87187	6825.40633	743.27435	3.07455	0.05391	801.26883	0.55184
2646	4632.65076	20.68290	9163.19084	492.18387	4.35925	0.07980	590.56792	0.51663
2647	3852.99931	24.44218	6293.82225	929.45910	3.45311	0.01732	908.20021	0.86187
2648	4425.22916	17.35566	10702.62264	669.49410	2.77673	0.03060	748.09455	0.36946
2649	4825.43090	20.85039	7824.39821	584.14843	2.85927	0.06216	732.94038	0.35524
2650	3393.47737	9.61392	6808.25901	348.97316	1.02293	0.04989	317.43982	0.54525
2651	3210.31636	17.11331	6860.43174	257.59138	2.49180	0.08831	118.59183	0.73448
2652	3698.52027	7.77219	6051.25904	315.08154	-1.75167	0.02110	293.45097	0.51847
2653	4763.34065	14.80278	10448.77085	328.21938	3.84083	0.02439	472.02818	0.34722
2654	4767.80223	14.72996	11093.57927	380.40088	1.81182	0.02024	541.34248	0.38687
2655	4911.78951	12.72692	7713.45419	443.37372	3.37418	0.03687	604.11421	0.33656
2656	3376.01627	20.34426	10250.65174	109.08670	4.22323	0.02038	67.82154	0.99415
2657	4895.88277	9.53861	10146.71295	576.25646	0.21565	0.03010	739.89250	0.37567
2658	2989.06240	16.94582	15664.86510	275.35050	3.40455	0.13957	236.60630	0.85424
2659	4506.64294	16.70110	8502.11439	502.78957	0.61284	0.03305	566.63815	0.42965
2660	3754.30144	12.36835	6483.95423	338.11518	-0.26675	0.01744	343.55863	0.41084
2661	4680.39365	21.50329	9186.28558	375.64003	3.32988	0.05586	434.42745	0.53230
2662	3505.05301	9.34924	8000.26134	428.42795	-0.38979	0.03320	350.08274	0.48290
2663	3129.21807	15.47947	6631.71863	294.63286	0.46457	0.01114	243.80442	0.29179
2664	3505.37018	9.31170	8026.68474	434.51660	0.02475	0.03803	378.03119	0.49408
2665	4182.57010	12.15485	13382.62876	245.65659	-1.52192	0.00495	300.91423	0.32854
2666	3504.58360	15.31812	11544.09149	446.79421	1.65376	0.08982	398.25096	0.50449
2667	4972.50998	8.57729	9515.13127	296.97269	-0.35420	0.00300	444.16793	0.12212
2668	3338.17609	24.30997	11585.35063	552.85158	3.67017	0.06423	470.73117	0.48921
2669	3981.52315	22.92824	7885.89425	780.95326	2.01554	0.03469	751.45621	0.54577
2670	4463.09339	20.96545	9281.32516	505.73579	3.92820	0.04795	654.03280	0.31108
2671	4614.70544	22.39005	8682.88927	658.97012	1.53355	0.04135	829.51786	0.42958
2672	3395.87323	11.72104	7556.49849	550.39243	2.49297	0.08133	462.54666	0.69959
2673	5264.68827	12.85828	10610.06388	37.87803	-2.44595	0.00011	9.22878	1.40226
2674	2549.57544	15.26083	3785.55051	471.80175	5.16452	0.30583	495.66177	1.78906
2675	4342.43333	16.19506	9349.81475	287.46035	6.53796	0.09763	372.57125	0.46238
2676	3990.34239	10.33519	12698.13078	173.69095	-1.66049	0.00404	171.87817	0.25398
2677	4313.27611	21.89931	8570.91546	609.96832	2.14368	0.03197	622.90921	0.56653
2678	4846.77413	13.59525	12176.07702	492.90121	1.38748	0.03296	628.34800	0.46237
2679	3735.99642	11.63419	8717.04021	526.23428	1.17882	0.03091	480.84230	0.59454
2680	4768.92987	8.13579	9541.00208	330.25792	-1.71406	0.00306	478.11936	0.08277
2681	4057.32475	16.37216	13214.92682	98.92169	0.97892	0.00219	80.04858	0.85219
2682	4146.88238	16.37306	9051.20748	596.93429	-0.96408	0.01840	663.60839	0.46369
2683	3996.81212	22.91053	7962.95343	612.77972	2.00856	0.03224	626.21734	0.50967
2684	4965.64604	9.95114	8483.82426	226.28137	0.98982	0.00434	326.09601	0.18460
2685	4300.52938	15.21319	12124.74626	476.63990	-1.38954	0.01699	583.15826	0.32002
2686	3500.92219	9.31499	7970.76637	517.29204	1.23140	0.03911	445.31175	0.48149
2687	3903.34687	24.72422	10045.80923	1489.21859	5.27938	0.01107	1375.22749	0.35535
2688	4005.96151	9.90063	9293.72720	355.81589	-2.12773	0.00658	448.57596	0.19377
2689	2569.88712	15.51072	10838.09954	391.19226	5.78889	0.29476	405.99250	0.10776
2690	3113.86783	19.80110	10557.83149	603.10561	3.64370	0.12835	445.86513	1.13743
2691	3868.89132	24.04784	12303.78314	701.60152	5.68764	0.01608	694.97903	0.07324
2692	3776.61106	9.54877	8263.20164	424.57129	-0.79891	0.04449	381.54925	0.63423

2693	4423.83429	15.44462	24636.46462	85.62307	-2.28080	0.00027	61.08027	0.37244
2694	2590.19031	26.30347	11543.84546	666.09362	7.76498	0.17370	439.28301	1.34740
2695	4680.40598	24.51446	8695.58177	467.12087	4.89379	0.06234	537.42498	0.96927
2696	4884.90441	9.34023	9168.67933	81.10975	0.17673	0.00384	49.91937	0.65411
2697	4545.28281	15.99975	11308.41679	417.17731	4.29173	0.06665	584.84736	0.35936
2698	3539.77962	9.37384	7465.21593	667.48813	2.80132	0.03814	617.59372	0.67272
2699	4499.75453	16.61432	8477.11695	609.49657	1.11689	0.04461	705.24048	0.42319
2700	4968.42450	9.99171	8429.20370	228.47967	0.19368	0.00461	330.42558	0.20246
2701	4465.35975	20.44024	10323.27944	655.90489	3.65524	0.01663	838.08503	0.30930
2702	2446.83775	13.78144	3894.00049	469.20049	6.01323	0.26591	555.46766	0.66674
2703	4846.27387	13.58693	12135.12338	577.97016	2.01011	0.03490	737.57447	0.44717
2704	4952.19691	10.76788	10057.15645	128.50048	2.11079	0.00358	153.25287	0.23453
2705	4704.12142	19.19769	9863.18810	590.47731	1.47742	0.04787	757.25511	0.30956
2706	3379.70919	9.63700	6906.69042	456.63117	2.35299	0.06133	474.78922	0.51950
2707	4814.02584	22.39331	11624.09189	763.38681	2.84066	0.01514	994.62210	0.24353
2708	4664.37603	24.35826	8648.04273	497.06269	5.47461	0.06108	580.22617	0.94745
2709	4138.30691	12.85201	12558.00961	261.22295	0.59291	0.00905	334.88119	0.18508
2710	4420.09516	16.93049	10243.21789	518.18763	5.78208	0.07920	686.57891	0.60557
2711	4888.46221	9.38927	12677.71560	439.05168	2.77407	0.01966	654.03593	0.27015
2712	4290.18788	18.10915	6909.09448	766.65245	2.35119	0.05925	827.91977	0.30438
2713	2489.57767	15.04259	3897.73893	453.02133	5.27914	0.37898	547.21363	1.00440
2714	2856.58593	16.48823	13801.89550	409.65730	4.22764	0.23332	364.70989	0.68955
2715	4422.37565	22.66347	8633.75874	589.08215	4.04082	0.01533	758.01451	0.28342
2716	4976.02329	10.30873	9100.27344	233.36514	1.40126	0.00411	338.20617	0.16876
2717	4462.01162	21.00070	9404.25798	587.44455	2.64911	0.04298	759.14642	0.37590
2718	4340.22231	19.41347	6386.51122	582.09193	2.13598	0.04547	608.62039	0.52164
2719	3222.49788	19.45941	13201.09992	376.12238	2.60751	0.14955	284.69576	0.88862
2720	3735.20570	13.03385	13722.60553	154.96497	-0.74272	0.00381	178.60542	0.23689
2721	3129.75478	18.08699	10227.83781	378.95385	4.00842	0.19263	268.21394	0.87656
2722	4446.26617	20.42182	16185.53875	710.54067	3.29979	0.01573	874.75743	0.23802
2723	3570.04314	17.63718	7380.15657	450.87546	0.60618	0.08769	460.16735	0.84220
2724	3378.76387	20.34843	10159.24200	136.85871	4.51426	0.01094	110.87884	0.94026
2725	4790.03093	10.24013	11216.66767	549.30691	0.04041	0.02495	703.09426	0.41043
2726	4242.23097	19.05138	7222.71683	482.97766	4.40899	0.05045	520.73797	0.42630
2727	4674.20826	18.89347	12410.08109	552.85333	5.20104	0.04057	694.88207	0.37513
2728	4965.00313	8.59768	9807.08889	161.18141	-0.58134	0.00296	201.90415	0.13184
2729	4642.44013	20.11236	8004.96318	370.75854	4.02159	0.04271	512.23561	0.33726
2730	4892.22455	12.75608	7333.57913	404.38350	3.23361	0.04026	547.03315	0.29303
2731	3648.28098	22.06583	12512.90095	95.27648	3.69864	0.01460	45.30926	0.71448
2732	3703.39064	24.59646	6223.88175	647.84716	3.16110	0.04366	591.53320	0.46655
2733	2956.34052	26.32049	12652.64201	485.04071	5.74085	0.11518	212.01913	1.68063
2734	5009.45453	10.10237	9282.61780	358.32221	0.96536	0.00536	533.95958	0.14994
2735	3671.98221	14.11096	10000.29704	459.26361	1.13231	0.06058	484.35942	0.51482
2736	4951.74688	10.75268	10154.29106	146.07616	-0.42502	0.00308	198.55847	0.32641
2737	5024.52713	18.29354	9205.62592	414.74410	2.47709	0.01900	604.61745	0.17711
2738	3474.09408	13.91469	7295.87432	603.44690	1.82880	0.06390	596.38494	0.56499
2739	3488.22700	13.78428	7415.73452	420.05398	0.65838	0.05083	356.95511	0.71861
2740	4453.94687	19.55813	5688.77286	552.88761	4.04909	0.04087	614.51486	0.39532
2741	3149.45799	19.34040	8109.67688	472.92650	2.44577	0.15042	329.96576	1.92665
2742	4662.97727	19.52486	12318.58385	333.07606	5.51126	0.10828	416.43669	0.41871
2743	4371.16791	20.47968	9886.28829	556.20890	2.18830	0.04206	638.62883	0.43062
2744	3767.09898	9.56647	8323.40712	591.66760	1.27386	0.06524	585.25211	0.53300
2745	3576.35549	13.40053	5161.58254	628.65743	2.92990	0.04070	609.46928	0.72672
2746	3670.93148	14.07633	9969.69235	443.20085	1.42589	0.06028	398.14432	0.67167
2747	4889.94469	9.33942	10180.27906	529.95212	-0.57413	0.02086	688.06867	0.33981
2748	4501.98760	16.65915	8863.30683	439.76934	-0.06046	0.04036	489.28303	0.42519
2749	4885.65130	9.31727	12567.34890	414.10411	1.27387	0.01637	611.07440	0.25635
2750	4329.62336	19.32783	6368.96943	701.58046	2.42542	0.06031	757.16245	0.36552
2751	4198.56890	21.04114	10546.07856	741.41856	2.10763	0.03142	771.71305	0.51493
2752	3753.49885	12.99689	13625.35483	179.57292	-0.36426	0.00486	174.90717	0.27972
2753	5003.08203	7.78474	14887.73336	149.14503	-0.40192	0.00184	205.65495	0.08876
2754	4338.48594	16.09123	9330.56820	500.07293	5.02873	0.10440	685.61873	0.44538
2755	4759.54911	18.19240	10683.31869	563.81959	1.62566	0.03213	729.15034	0.38241
2756	3756.30997	12.42160	6500.89204	370.17220	-1.83493	0.01521	431.76738	0.35661
2757	4663.28966	19.55956	12856.97679	440.87221	3.62915	0.09564	596.88759	0.49522
2758	4747.93094	14.79150	9634.84986	395.94400	2.97639	0.05740	547.51210	0.58326
2759	4948.79573	8.54301	9732.32013	216.98874	-0.60297	0.00298	301.66414	0.14447
2760	4687.28301	21.35610	17788.65714	424.65569	5.71152	0.07592	523.45474	0.57824
2761	4921.46632	19.95349	11513.15112	395.54406	2.83246	0.05161	536.52091	0.40352
2762	4412.72290	17.91582	7010.43123	553.90923	2.59297	0.03466	601.42523	0.48102
2763	3858.30685	24.40669	6382.79240	964.98867	2.46315	0.01832	916.96422	0.61860

2764	4376.86915	18.81584	8561.07145	678.49640	2.25305	0.04472	727.52631	0.39816
2765	3415.84864	24.09092	11287.06046	936.95442	8.58419	0.17389	664.27280	1.99842
2766	4977.81415	7.10197	16407.48400	173.36130	-3.26909	0.00168	244.52490	0.14258
2767	4944.76427	13.13459	9375.95072	386.22639	2.02481	0.01009	590.25146	0.19275
2768	4504.73441	16.73345	8467.85348	387.17794	-0.32376	0.02919	426.83493	0.28041
2769	2915.92800	20.10484	8020.23339	570.61854	5.43190	0.27787	467.11033	1.01121
2770	3991.48575	22.91938	7938.17834	733.21629	2.00935	0.03294	813.59333	0.54677
2771	3833.92844	15.81113	8643.30741	761.42517	1.92890	0.03230	773.35295	0.55883
2772	3824.19943	25.12121	6697.17705	71.55494	4.18485	0.00607	27.83624	1.47082
2773	4645.10191	15.48592	10183.45021	396.35920	3.91560	0.09101	548.11976	0.43070
2774	5013.22723	6.83968	8882.19209	263.83364	1.64521	0.00132	401.40784	0.03267
2775	4537.04992	15.86719	11181.77384	400.01716	5.11470	0.08782	568.90155	0.33199
2776	4244.68181	17.30342	7631.09008	611.83490	-0.55540	0.02179	689.71662	0.50009
2777	4780.82953	10.44050	11863.91332	496.10085	-1.80838	0.00811	678.65745	0.11756
2778	5116.57272	10.83039	9374.70939	75.66564	-3.00522	0.00072	69.94567	0.75251
2779	3680.65557	7.68448	5910.78398	407.17718	-0.67983	0.02678	433.97085	0.51950
2780	4972.82802	8.58541	9519.96974	297.34847	0.30816	0.00329	442.48569	0.11654
2781	4616.03462	7.78266	17510.20822	138.72695	-3.62421	0.00004	189.44470	0.09051
2782	4784.43281	15.48255	7291.88366	390.37774	3.40918	0.01367	569.59625	0.21766
2783	4332.55548	17.12089	8143.17914	622.39283	2.99220	0.05218	655.50752	0.32580
2784	4174.48829	18.99094	8225.54970	841.84373	2.54626	0.03848	874.90830	0.49532
2785	4252.88464	23.32777	12236.66563	689.16122	5.56795	0.01244	822.56199	0.12788
2786	3539.26812	9.40263	7354.65270	504.78348	1.94432	0.04368	413.52310	0.63763
2787	3170.88966	15.82069	12160.99855	379.42963	3.79504	0.11843	252.42912	0.58258
2788	3508.51882	9.34340	8004.50231	341.00650	-0.45652	0.03625	264.67796	0.44514
2789	4210.68613	12.44964	12453.61455	192.67482	-2.02299	0.00358	221.07635	0.27531
2790	4678.28928	21.50244	9183.03239	548.51378	3.33977	0.05515	672.21871	0.53127
2791	4011.15354	9.35749	9028.93551	258.35908	-2.95242	0.00674	285.52395	0.24564
2792	4144.01945	19.67018	15219.38348	92.06512	3.13172	0.01294	53.31872	0.73924
2793	4976.24627	16.46551	9553.93020	290.50668	2.23904	0.03882	352.51873	0.49822
2794	2556.93097	15.74027	11662.63555	458.46861	5.48569	0.24236	392.93513	0.51866
2795	4852.31588	13.68533	11890.10859	335.80712	2.26014	0.04363	401.55374	0.49122
2796	3831.21155	23.92784	7087.95580	559.96606	6.50410	0.06497	578.24275	0.42639
2797	4473.79333	20.44823	13800.93633	544.84369	5.44591	0.10924	695.27574	0.44467
2798	4978.14194	17.60450	8067.03574	722.22072	0.56706	0.01991	949.84944	0.31045
2799	5078.36618	9.63749	14133.54746	137.25458	-1.29326	0.00251	174.79391	0.35023
2800	4790.59203	10.24800	11163.42027	399.59967	-0.51722	0.02613	501.11495	0.41697
2801	4334.11822	17.21144	8157.65976	498.84458	2.93149	0.04313	504.57844	0.41660
2802	4420.52955	22.67645	8536.36988	560.52812	3.61580	0.01432	769.26492	0.28974
2803	4899.83237	13.47544	8997.79296	446.51349	2.73022	0.01575	650.11726	0.23916
2804	4709.04223	19.22943	11505.19691	380.83459	4.45501	0.08210	498.66276	0.56646
2805	4629.54945	22.28138	9850.47317	674.54306	2.26757	0.03870	847.82708	0.42247
2806	5020.68225	13.82061	8449.56263	442.44395	1.55951	0.01675	653.32597	0.21058
2807	4193.99231	23.84300	8436.17540	614.61481	1.89993	0.05363	649.14379	0.55984
2808	4458.20665	19.59915	5661.27670	519.00604	3.84296	0.03129	575.32411	0.45753
2809	4921.14723	19.95372	11498.61871	470.61268	2.09717	0.05211	641.41293	0.39070
2810	3696.17397	24.56908	6227.81604	614.21100	2.58668	0.04008	609.10895	0.46990
2811	4290.67726	17.66654	7526.77261	788.30000	3.44027	0.04842	824.97334	0.42527
2812	2961.99217	24.81767	7227.43905	547.39572	5.86086	0.15319	362.91801	0.99777
2813	2554.52418	15.31521	4094.51782	477.43393	5.63307	0.24484	403.53594	0.65604
2814	3801.62527	13.07087	12118.21907	147.10702	-1.70147	0.00526	140.10581	0.77160
2815	3219.67695	14.51426	10054.78796	393.61553	2.92535	0.09547	436.71515	0.35480
2816	4795.51194	10.39035	11116.25144	430.59087	1.75391	0.03186	527.34749	0.42638
2817	5095.94658	13.00493	12611.05845	63.51435	-1.86110	0.00070	41.27400	0.41561
2818	4664.81914	19.55855	11924.88434	483.28874	3.73197	0.09249	649.27208	0.49838
2819	4255.19390	18.97581	7157.39073	842.65705	2.78858	0.03727	904.64983	0.46156
2820	4337.24431	23.79005	10413.91052	927.60972	3.21678	0.02920	1001.46929	0.55886
2821	4335.05391	18.26287	6882.65584	486.69435	3.83270	0.03532	496.06755	0.51527
2822	3380.53052	9.62890	6931.43386	365.63595	2.55084	0.05882	359.15267	0.51502
2823	4078.92611	21.87262	8905.79768	786.27674	2.09572	0.02623	807.39176	0.49543
2824	3186.09722	16.53133	7062.33210	438.98105	2.51267	0.12149	403.28143	0.72222
2825	4640.17837	15.42554	8184.74166	422.29343	5.62782	0.10386	588.35833	0.46470
2826	3800.88520	20.35089	11399.10458	469.51048	-2.00407	0.08613	485.71881	0.87228
2827	4246.58744	19.09171	7254.35818	568.68610	3.87937	0.04783	605.60223	0.47231
2828	3137.12296	16.79605	9538.35760	474.07438	2.54044	0.18699	390.07657	0.66056
2829	3221.12745	14.50946	10068.45127	246.15001	2.49082	0.09358	238.83850	0.38691
2830	3524.56015	16.73400	16950.57981	387.78956	1.77859	0.15558	325.19604	0.76866
2831	4330.81993	18.33687	6853.60367	579.27464	3.01099	0.03101	640.73974	0.51641
2832	3217.49017	14.55057	10018.06057	364.96468	3.30011	0.09749	364.09426	0.41281
2833	4972.92959	8.58266	9206.66982	283.62469	-0.16465	0.00353	421.40879	0.10242
2834	4424.97200	17.39325	10699.54601	548.28170	1.84338	0.02799	587.93850	0.40337

2835	3740.31450	11.69756	7551.64942	860.09756	3.25901	0.02689	828.75254	0.67789
2836	3734.43214	13.06754	13705.86339	139.54970	-0.36634	0.00373	133.37809	0.28053
2837	3536.28801	17.41315	7989.09930	429.55753	0.49298	0.05807	432.37932	0.58244
2838	4508.18454	22.53899	7787.29405	384.73501	6.19224	0.14224	390.18547	0.75897
2839	3832.53461	15.81005	8607.91221	797.50996	2.82338	0.03742	785.84856	0.54495
2840	4708.81213	11.13926	15957.62605	152.61683	1.24995	0.00502	206.33016	0.26116
2841	4430.19962	14.78895	6254.81617	696.40617	2.65084	0.02377	781.66328	0.35292
2842	4117.78648	19.59303	15020.61758	98.04091	2.17412	0.01107	52.69645	0.67116
2843	4281.49774	14.23614	6826.12413	603.18670	-0.16361	0.02506	698.19670	0.42163
2844	3536.61850	17.39312	7960.19906	407.94646	-0.41339	0.05144	388.81605	0.58685
2845	4748.54287	8.56110	9960.51886	272.69951	-4.47747	0.00338	368.24672	0.11681
2846	4240.66488	17.41477	7582.10455	635.85009	0.86224	0.02492	720.51703	0.43914
2847	2951.98744	16.90356	15139.19643	373.23666	3.46178	0.23885	316.10458	0.72242
2848	4182.35042	11.25578	15094.78979	135.41473	-3.40735	0.00210	152.48481	1.17268
2849	3766.89764	11.91383	9283.75467	612.90884	1.59008	0.02901	587.43814	0.65609
2850	4200.22321	23.83664	8453.04043	750.34293	1.85492	0.04920	821.82022	0.56149
2851	4759.16165	18.18506	10681.65282	665.25193	1.05068	0.03107	853.05078	0.40090
2852	4707.99667	15.77057	11408.95145	452.26649	3.56994	0.05173	593.36837	0.39662
2853	4966.03337	10.88237	10172.33643	110.49494	0.31189	0.00304	129.44625	0.28753
2854	3308.27548	14.82911	11743.85292	379.45680	1.94535	0.05685	364.97254	0.64534
2855	4628.75589	22.28121	9793.93616	673.79223	1.68272	0.03763	846.46929	0.38069
2856	4078.84130	21.83128	8922.85536	662.33140	2.37590	0.02933	652.05089	0.49687
2857	3715.10998	24.54369	6213.35324	512.30730	2.34134	0.03784	411.26872	0.45542
2858	4247.68350	19.10851	7269.31273	632.95828	3.96420	0.04716	695.13500	0.50600
2859	3215.78368	14.54675	9993.84267	422.09194	2.55581	0.09315	446.13780	0.45295
2860	4737.54347	15.91257	12184.30076	322.74715	3.51355	0.04491	434.13618	0.42739
2861	4918.14579	10.74099	8905.73093	176.22027	1.50496	0.00540	251.67169	0.13391
2862	3475.77426	13.92675	7313.64612	547.64845	1.76564	0.06343	494.92262	0.60627
2863	4366.32040	18.85936	9571.78508	429.12168	4.12316	0.04821	434.04658	0.40086
2864	4506.51778	16.69920	8856.37011	585.72315	0.05904	0.03132	693.75773	0.34424
2865	3539.32484	17.43448	8015.21422	416.94106	0.51397	0.05715	449.39231	0.58330
2866	4574.63864	7.67257	8847.19453	320.78414	-1.47800	0.00423	456.18632	0.08483
2867	3508.08537	9.32252	8045.50175	423.61645	0.55757	0.03842	396.65785	0.46821
2868	4893.66649	9.52336	12781.76067	395.33915	4.81440	0.02190	587.93690	0.22977
2869	4774.40762	10.20669	11720.73714	409.12521	-3.41381	0.00794	553.07625	0.11814
2870	2574.19136	15.16537	10954.63030	463.88441	5.48574	0.25495	485.45593	0.91102
2871	4688.12081	21.36133	17492.95994	498.08969	5.21658	0.06853	623.83454	0.60003
2872	3740.58353	11.70966	7552.60549	686.58387	3.12393	0.02642	641.06257	0.51695
2873	4450.35565	20.36519	11010.14945	662.47126	4.33940	0.01677	781.84958	0.26986
2874	4822.25924	20.82466	7834.31579	609.58090	3.94765	0.06432	741.56700	0.38439
2875	4575.12746	10.35060	9301.93161	539.38021	-2.00048	0.02632	699.23706	0.24735
2876	3137.10946	15.60843	6715.16073	300.33444	1.00383	0.01694	281.87883	0.19902
2877	4421.29142	22.67585	8538.48300	729.48230	3.94045	0.01342	953.11382	0.28709
2878	4704.34669	19.19264	9862.56356	601.77846	1.44918	0.04213	774.09154	0.28672
2879	3786.41036	24.15631	11031.85366	764.79496	2.82160	0.03932	748.68193	0.80053
2880	3735.98935	11.58781	8734.86061	626.68971	0.67018	0.02713	631.08033	0.64378
2881	4845.00780	12.66599	16794.70704	338.70891	3.50321	0.02259	473.53479	0.25560
2882	2442.97075	13.62156	3719.84179	479.36382	6.32516	0.23542	561.54369	0.29554
2883	4552.09105	17.76341	8423.79946	435.93397	1.95081	0.02609	567.80918	0.30606
2884	3715.66831	24.60371	6223.49708	536.31970	3.51144	0.04898	460.87163	0.47098
2885	4461.55206	19.60745	5661.41399	604.41884	3.25562	0.03066	715.36680	0.46120
2886	4606.25401	18.87771	8416.87265	451.58326	5.48630	0.03007	593.50227	0.31233
2887	4007.67631	9.30630	8900.26216	278.31369	-2.64288	0.00634	321.40028	0.22562
2888	4199.95652	11.99564	12006.14924	106.50281	-1.89974	0.00153	97.74338	0.73515
2889	4463.46058	20.99714	9417.36576	560.65011	1.96695	0.04522	727.59105	0.36263
2890	4454.06727	21.75541	7636.95420	411.39767	3.51538	0.03162	525.69914	0.27278
2891	4343.94754	18.76065	7836.60418	370.91831	6.97245	0.11142	414.22333	0.49561
2892	4958.10338	6.63778	10777.34615	355.61290	-3.06128	0.00577	499.11067	0.16275
2893	4425.39807	17.36053	10703.04834	641.52175	1.51122	0.02963	720.52358	0.36718
2894	2475.67813	13.53371	4272.43290	452.69570	5.93490	0.11671	358.58644	0.89635
2895	4281.60491	14.22596	6841.98225	511.42022	-1.07647	0.02909	572.30551	0.32701
2896	4875.67844	7.72458	9865.24518	400.61043	0.44488	0.01110	560.36540	0.19907
2897	3410.28872	24.20603	11229.64764	1373.28780	8.40313	0.14242	995.24140	1.95639
2898	4340.32678	19.41237	6387.08070	743.84348	1.89091	0.04740	805.04069	0.48433
2899	4281.35909	14.22760	6844.33948	569.92602	0.72607	0.02941	666.42579	0.34876
2900	4573.54340	20.71706	16970.11531	539.49664	5.55448	0.09515	679.22590	0.49166
2901	4426.83015	17.35843	10718.00572	721.49990	2.30202	0.03456	806.89898	0.36316
2902	4515.83868	20.83437	11713.48701	538.45243	4.40727	0.01790	662.29623	0.32137
2903	4823.31817	20.83950	7785.27318	469.92236	4.59813	0.04374	587.53674	0.44843
2904	3845.07569	20.22507	6355.57044	720.60165	2.29188	0.02594	720.42970	0.51146
2905	4041.62092	12.71079	15253.19844	89.36940	-2.81157	0.00307	70.74135	1.35380

2906	3504.90667	9.32541	8013.24719	409.00579	0.25136	0.03704	358.32183	0.47755
2907	4573.75660	7.65108	8602.37373	333.84703	-0.03781	0.00561	457.74263	0.11832
2908	4083.67676	18.97692	6694.13479	732.14043	3.34347	0.07161	728.56725	0.60800
2909	5106.81892	10.78744	9074.80441	78.39093	-4.03311	0.00083	75.64140	0.73924
2910	4658.79176	19.54648	12703.78009	392.46916	4.67672	0.09465	514.92329	0.48794
2911	4489.84028	21.07309	9250.54746	605.96302	2.40123	0.04340	793.93893	0.39946
2912	4899.18631	13.49202	8173.37825	442.65537	1.99330	0.01645	640.51466	0.21737
2913	4850.93049	15.83179	8875.46552	475.77406	3.94094	0.02844	699.26596	0.25759
2914	4768.82193	8.13551	9543.62502	368.30115	-3.30210	0.00285	532.54734	0.06372
2915	4957.54687	6.63565	10632.45491	372.75312	-3.50510	0.00614	523.48781	0.18703
2916	4576.19264	10.23039	9304.34501	450.56292	-2.74417	0.01834	570.93778	0.19647
2917	4941.41851	13.05325	9348.61246	456.69959	2.60523	0.00951	676.26275	0.18436
2918	4909.16215	13.60664	8014.53546	459.45250	4.00882	0.01852	680.27398	0.19580
2919	4761.24793	14.81302	10480.92388	407.89839	3.00268	0.02325	594.13690	0.33386
2920	4513.99801	19.82082	7361.21928	603.52762	1.68639	0.04603	733.47726	0.45373
2921	4178.89446	18.97135	8265.00519	711.33807	1.33092	0.03269	781.40320	0.51845
2922	4723.77269	19.33101	9907.66733	496.01062	1.31918	0.03848	643.72141	0.27914
2923	4450.46921	20.10561	13471.58852	531.35338	5.31701	0.10451	632.67515	0.34086
2924	5023.05277	18.24628	10080.22668	422.86414	2.28907	0.01756	614.90287	0.25435
2925	4400.86925	15.26450	24650.68442	86.87761	-2.32355	0.00033	72.47279	0.23437
2926	4752.10634	14.66956	9483.41995	432.35993	3.87403	0.02291	626.90881	0.33433
2927	4757.82204	21.58542	19571.10353	475.69506	4.81577	0.03670	606.99464	0.33019
2928	2899.82646	19.95993	7942.43234	463.32199	5.01419	0.27342	304.27942	1.09435
2929	3869.55023	24.39345	6315.25570	908.86856	4.95608	0.01711	896.64339	0.68456
2930	4418.26025	22.71090	8502.54685	640.87097	3.26918	0.01377	849.13317	0.24242
2931	4765.95437	18.39119	10592.39522	654.27296	1.59809	0.04639	827.41672	0.31857
2932	4487.05626	22.90282	7713.55228	395.43158	6.78231	0.13696	451.54042	0.68064
2933	4567.40228	22.50790	12909.75870	500.34680	5.29683	0.02733	623.42178	0.36068
2934	4779.21591	10.38841	11641.17870	522.29511	-1.13017	0.01026	694.82735	0.14044
2935	4230.18644	18.85662	6821.99831	736.40262	3.26349	0.04593	781.73252	0.55321
2936	4803.80053	22.28225	11471.64419	475.75197	1.83250	0.01400	624.53980	0.28340
2937	4230.49658	18.87457	6832.24101	593.28411	2.52613	0.04334	607.78803	0.53936
2938	4333.67799	17.24201	8153.85406	643.33497	2.16790	0.04163	705.74213	0.37038
2939	2572.50832	15.75672	11189.42899	464.17637	5.31630	0.28539	497.94726	0.18914
2940	4430.59100	14.69009	6175.13452	640.41140	3.04742	0.02451	700.26681	0.33000
2941	3923.74277	18.57529	7276.84972	667.88068	5.62119	0.05351	553.12730	0.63549
2942	4927.72630	7.60915	9213.97351	354.86602	-3.70305	0.00034	533.09884	0.03280
2943	4767.23848	18.34494	10671.11156	530.94620	1.56703	0.03760	690.52357	0.37444
2944	4845.35201	12.73128	12983.62718	455.91360	2.94793	0.02509	647.49084	0.32968
2945	5009.83391	10.11016	8312.65839	329.46505	1.72840	0.00615	493.21842	0.12409
2946	3216.75096	16.53102	12184.45405	365.30770	2.00062	0.08275	296.98375	0.78561
2947	4745.64350	21.53150	19963.57079	397.96682	3.16936	0.03481	497.81671	0.36702
2948	3841.67442	20.21894	6350.56744	732.02556	2.03376	0.02300	755.24139	0.52155
2949	4962.87937	8.31760	9942.68807	213.22494	-1.34948	0.00610	294.67293	0.17285
2950	4820.80881	20.94747	7790.21485	569.54555	3.53094	0.04309	702.35975	0.40755
2951	4759.02181	21.63347	19573.28748	683.77891	2.84627	0.03622	882.27678	0.33640
2952	3870.83141	24.05563	12319.67415	610.19698	5.25940	0.01654	585.11779	0.07734
2953	4647.25353	22.35331	9737.77528	543.53076	2.67624	0.03481	696.18997	0.48388
2954	4197.39886	21.01010	10530.36790	665.36460	2.14702	0.03478	686.38452	0.51906
2955	4416.00340	22.76350	8394.08100	570.03754	3.07783	0.01420	742.89049	0.32757
2956	4281.53948	14.16689	6881.37152	539.53073	-2.61951	0.01995	621.17565	0.47229
2957	4567.51019	20.65843	17842.67599	373.86196	5.98914	0.08145	467.82487	0.43996
2958	2793.71303	14.51505	13715.58346	526.10070	4.69758	0.25516	452.99799	0.58601
2959	3720.81099	24.20815	10661.51421	911.57783	4.33549	0.05655	835.06133	0.64897
2960	4244.30216	17.32189	7623.33752	703.97500	0.19952	0.02074	793.15941	0.53527
2961	3294.64238	17.29762	7433.77867	395.79343	0.18790	0.08458	327.69681	0.77515
2962	4993.45195	7.06779	9295.54429	261.12173	-5.17544	0.00027	373.37244	0.03371
2963	4573.16767	22.49988	12938.35042	524.08133	4.99504	0.03120	653.03012	0.35016
2964	4550.03320	16.06198	11290.32174	395.50095	4.76666	0.07208	559.45379	0.37644
2965	4418.56373	17.89361	7185.17950	574.41302	1.68599	0.04060	664.67031	0.40753
2966	3735.65303	24.18695	10715.59798	757.49987	4.30306	0.05449	726.53241	0.74327
2967	3857.14170	24.39127	6301.65262	942.74591	2.92274	0.01719	844.63290	0.81436
2968	3906.32610	11.36975	14422.05248	190.50118	-1.00362	0.00352	233.26464	0.48701
2969	4397.97359	6.50649	7827.70862	408.65746	0.12390	0.00420	530.49030	0.06853
2970	3361.55992	19.13100	18927.18740	423.88446	1.81331	0.10803	356.62474	1.06391
2971	5023.16010	13.88367	8345.58341	388.00972	4.51459	0.01822	571.73268	0.16605
2972	3781.96825	24.19864	11013.63220	511.05617	2.88475	0.03930	424.78389	0.74650
2973	3766.08611	11.89697	9273.64025	693.21199	1.37549	0.03006	720.68145	0.49174
2974	3910.26053	12.93215	12022.30871	416.01579	1.04417	0.03847	433.90768	0.43579
2975	3866.57595	19.57760	13672.60574	114.16934	1.34075	0.01415	91.41759	1.27519
2976	3214.55417	19.20807	13241.38390	511.92663	2.76839	0.19990	432.39702	0.72175

2977	3187.35352	16.57883	7020.92136	339.87469	2.78121	0.12192	219.06628	0.73317
2978	4465.87232	20.38149	13661.18626	470.93612	5.89928	0.10947	575.35794	0.38471
2979	4786.15972	22.27225	10656.50831	591.49396	4.14954	0.05589	749.38849	0.50176
2980	3763.77215	19.01239	12344.13796	409.12387	-1.33669	0.07367	360.77274	0.93856
2981	2449.44531	13.75515	3932.17305	525.19043	5.96446	0.26960	602.72934	0.49968
2982	4411.88847	17.94012	7021.16626	523.27844	2.18934	0.02903	538.78023	0.47983
2983	4957.73092	6.62684	10219.02646	348.41976	-1.31453	0.00618	505.72685	0.21149
2984	5022.85899	18.24162	9227.57426	419.66786	2.19139	0.01737	602.54466	0.24848
2985	3767.10586	9.57134	8359.79303	411.88401	0.05912	0.05347	392.60921	0.58694
2986	3630.13925	23.25443	5143.24811	695.23054	7.35684	0.07284	692.96645	0.51578
2987	5076.05381	13.21340	9879.09349	107.28096	0.07031	0.00133	128.46683	0.31629
2988	5264.05882	4.53103	4525.51318	29.84379	-3.51337	0.00003	0.04781	1.17705
2989	4486.10945	21.01017	9245.28760	528.29616	2.79485	0.04300	702.00855	0.39365
2990	4663.24973	19.56534	12852.77691	255.98573	5.50376	0.09478	308.29921	0.49517
2991	4239.84295	17.40388	7573.28751	716.80600	0.69973	0.02461	798.32993	0.48150
2992	4700.83401	18.26321	16670.55148	314.89007	4.52193	0.02965	395.91640	0.17602
2993	3173.38037	18.32885	10539.80696	309.11012	3.23356	0.17319	251.25977	0.74545
2994	4573.29712	7.61556	8647.65081	239.76379	-2.38834	0.00504	310.10327	0.14092
2995	3129.07433	18.10017	10195.77902	451.30045	4.27559	0.19131	417.91686	0.66991
2996	4676.26411	7.47411	19889.55212	88.56916	-5.18297	0.00002	87.69512	0.32256
2997	4433.14989	15.55488	6484.38973	624.62029	2.09877	0.02460	704.76004	0.35878
2998	3767.05769	9.55411	8327.04195	504.27308	1.81642	0.06773	477.72354	0.64136
2999	4612.06781	22.34789	8675.13458	706.30850	1.37978	0.04661	887.26259	0.43165
3000	3393.64575	9.57956	6806.04027	342.12511	0.67009	0.04948	318.60509	0.57156
3001	4604.73920	18.84458	7948.56460	459.49888	3.98399	0.03199	617.94857	0.28097
3002	4605.22280	22.18803	10974.91442	345.06886	4.87826	0.06657	378.04352	0.57040
3003	4783.30476	16.53533	9814.44063	620.11754	0.99888	0.03098	806.21381	0.34238
3004	3583.08005	13.22469	5363.92207	499.22075	0.77403	0.04244	454.53322	0.57577
3005	4485.25816	15.11557	23595.45700	78.84346	-3.01540	0.00023	56.29585	0.47606
3006	4669.89828	20.16318	8191.71083	285.08122	4.60897	0.04820	382.65637	0.29857
3007	4608.18549	18.91649	8434.90024	371.91932	4.95388	0.03833	476.50314	0.32137
3008	4844.46003	12.70198	16847.32467	441.30735	2.55709	0.02527	628.89690	0.24243
3009	4542.89621	15.90824	11159.39022	391.90103	6.44182	0.08814	548.50744	0.30710
3010	4835.64285	14.47146	11297.92380	370.49770	3.17482	0.03074	560.00386	0.23821
3011	4373.52419	20.45334	9931.97225	545.52253	1.82690	0.04246	634.19218	0.48453
3012	4256.37348	23.26498	13481.36445	895.87537	3.53555	0.00910	1061.67730	0.13391
3013	4975.03143	10.27448	8739.04211	240.34018	1.35525	0.00435	343.27847	0.13756
3014	4551.51833	17.77682	8422.81179	474.75904	0.81973	0.02785	621.76007	0.30476
3015	4402.89649	22.64752	8501.59971	544.97682	4.33823	0.01835	732.00089	0.27454
3016	4242.18291	19.23023	7235.26115	590.50771	3.93147	0.04622	638.12476	0.44563
3017	4556.47437	22.53187	12748.37876	611.16256	5.05142	0.02746	755.21156	0.40184
3018	4244.35615	17.31827	7624.91279	720.82624	0.05455	0.02054	808.35670	0.53652
3019	4556.64945	10.60337	15031.20455	85.35439	-0.98123	0.00003	75.55914	1.21065
3020	3429.96409	8.10496	13702.52311	348.81094	1.32947	0.03405	372.82148	0.46328
3021	5022.94054	18.23926	10111.15720	554.28510	1.63577	0.01720	793.44848	0.24074
3022	4573.76914	7.64524	8692.45096	395.24025	-2.14625	0.00424	562.83954	0.08013
3023	4885.97360	19.81606	11145.01651	367.11996	3.59759	0.06662	488.76553	0.39802
3024	4333.80914	17.14822	8144.40452	559.46194	3.85980	0.04590	604.37574	0.35540
3025	3925.51999	20.02104	9498.98055	718.02586	6.40803	0.05471	578.95289	0.63421
3026	4419.87303	17.90998	7191.91132	654.38078	1.74764	0.03475	789.94887	0.31704
3027	4504.57246	16.53741	9006.67152	520.99904	-0.72497	0.02845	615.33840	0.43873
3028	4365.59821	18.84103	9568.85485	482.43733	3.90132	0.05456	530.27203	0.32686
3029	4407.97743	15.30810	24209.11983	79.70575	-1.23054	0.00035	56.08433	0.36628
3030	4338.37078	17.13011	8210.70104	611.64091	2.05946	0.03821	653.48936	0.32453
3031	4673.48675	18.85781	12267.50557	436.22554	5.21097	0.04019	535.86502	0.37512
3032	5253.29426	15.47094	9493.08029	45.74984	-3.60787	0.00014	27.41648	1.19468
3033	3679.75153	7.68987	5917.53136	379.52142	-1.52456	0.02104	356.16011	0.52776
3034	4825.57202	8.77376	9326.73253	117.22429	-0.44633	0.00406	116.22602	0.68400
3035	3540.04257	16.81061	17360.19484	492.51738	1.20632	0.14578	461.15447	0.71600
3036	2587.76820	26.06346	11160.35956	773.71631	8.57863	0.18944	511.50954	1.05545
3037	2926.78324	26.31837	12626.10919	539.45226	6.50289	0.13830	290.10720	1.57060
3038	4374.54189	20.45841	9923.16926	563.48860	2.92513	0.04201	622.70719	0.46104
3039	3127.97734	15.52995	6678.24980	304.82597	1.64888	0.01468	250.36682	0.20759
3040	4603.92033	22.30013	8602.24756	661.53565	2.28349	0.06300	796.06402	0.33552
3041	4794.53032	10.36002	11106.67509	577.27660	0.68915	0.02908	745.94223	0.44183
3042	4637.33335	16.97281	10122.36697	516.79182	4.83998	0.06885	716.06115	0.54993
3043	4089.18611	18.94421	6755.72453	665.32616	3.16951	0.06416	690.92264	0.62888
3044	3693.16018	14.11520	10419.33928	364.11589	-0.10186	0.05348	329.39821	0.69752
3045	3599.34331	13.07356	19942.03378	303.52649	1.61011	0.02083	340.15506	0.36981
3046	4146.98179	16.37103	8962.43466	661.14667	-1.26451	0.01853	734.59366	0.45538
3047	4957.45785	6.62207	10613.05053	405.93955	-3.70363	0.00600	589.42273	0.16829

3048	3575.65770	13.34603	5213.25301	575.21593	2.33431	0.03643	550.51208	0.68936
3049	4749.38124	21.54848	19533.66922	593.05626	4.68975	0.03494	756.82040	0.37215
3050	4794.15828	10.36280	11110.54911	613.85068	1.19925	0.03491	783.24667	0.40512
3051	4644.46494	15.45117	8184.38629	372.69985	5.73786	0.10489	505.59580	0.46486
3052	4493.64079	15.25537	23089.76424	78.86099	-0.37389	0.00035	50.82376	0.35393
3053	3381.84778	7.67569	13566.12675	264.43306	0.91264	0.03029	206.96857	0.57112
3054	3138.50933	13.17356	8693.68010	680.21008	3.96311	0.32042	580.97161	0.82043
3055	4794.30406	10.35274	11099.25255	675.85864	0.51748	0.03164	872.40647	0.45481
3056	3504.31040	15.38024	11571.68134	544.39509	1.83635	0.09259	503.56675	0.45854
3057	4967.15813	9.86371	8837.44544	405.59413	0.70238	0.00702	575.85353	0.17106
3058	4342.78386	18.74753	7874.98414	271.69887	7.34506	0.10886	294.72290	0.48926
3059	4645.09373	20.80576	9223.00088	521.54776	2.98712	0.06974	655.84330	0.49139
3060	3473.73377	13.91577	7297.11523	616.33983	3.01105	0.06468	589.23503	0.57149
3061	3910.16870	11.56134	15487.83734	139.90971	-1.36863	0.00440	139.53603	0.59771
3062	4294.91702	17.68851	7541.79568	833.53581	4.07165	0.05155	853.10564	0.43500
3063	3539.49316	17.41359	8025.79642	452.88996	-0.14094	0.05840	485.87359	0.53238
3064	3754.52094	12.36688	6483.93707	391.71038	-0.44479	0.01789	441.21119	0.36208
3065	4297.09174	15.21845	12170.90078	584.40353	-1.64019	0.02011	684.42024	0.27401
3066	3766.24252	11.90715	9267.62570	509.11033	0.81198	0.03069	471.99714	0.49545
3067	4972.87922	8.58918	9174.24500	245.09851	0.47756	0.00340	357.64150	0.11831
3068	4769.26288	14.66399	12328.38522	394.53606	2.59255	0.01942	561.73229	0.36590
3069	4281.62354	14.16983	6881.66883	494.52111	-2.25770	0.02028	561.77353	0.47957
3070	4455.14926	19.58295	5659.10293	602.64752	2.13875	0.03025	719.42578	0.46491
3071	4669.42279	16.51265	16624.85109	338.57328	5.48648	0.09915	441.81949	0.43315
3072	4337.27181	16.11335	9327.29836	374.41784	5.43746	0.10791	512.81228	0.43911
3073	4241.05374	24.67141	8285.76167	596.16784	1.61121	0.02003	676.22261	0.30164
3074	4604.69783	20.65254	21018.83757	341.38164	5.23631	0.07738	424.82632	0.48861
3075	4553.40097	22.52606	12865.39085	569.39139	4.38928	0.02415	695.82468	0.36225
3076	3735.87129	11.65163	8695.14491	660.69354	2.29237	0.03130	667.68407	0.61501
3077	3345.54000	19.52794	17826.70468	332.56351	0.82734	0.13724	254.41913	0.75169
3078	4877.82770	16.87714	8566.61554	482.98019	2.89613	0.06619	647.73166	0.37225
3079	4602.32767	22.29231	8594.84938	625.75813	3.25891	0.06579	736.52885	0.34427
3080	4068.02844	25.70102	8968.96221	702.51790	2.47855	0.01294	717.10392	0.36851
3081	4326.05749	17.05293	8099.89886	549.92958	3.78471	0.05336	571.06101	0.31394
3082	4077.93828	21.81099	8930.84664	882.41748	3.13301	0.03845	864.80798	0.51923
3083	4377.58772	18.82019	8561.04137	642.24520	2.25649	0.04426	706.55986	0.41093
3084	4843.67507	12.56306	13050.56536	339.80109	3.02823	0.02130	469.43045	0.31729
3085	3309.60853	19.03495	19313.02613	321.50260	1.70489	0.19540	248.45323	0.92630
3086	4468.55513	20.39980	10294.10920	727.95870	4.25571	0.01991	926.18135	0.31251
3087	4339.06304	17.14747	8213.42989	636.60035	3.02022	0.03851	684.44793	0.36704
3088	3861.70523	23.99019	12331.30904	756.73336	6.45208	0.02084	754.12571	0.06972
3089	4497.05360	22.63150	7693.99140	580.65620	4.09133	0.14443	684.68373	0.73436
3090	4334.64912	17.29180	8160.52558	655.95595	2.19188	0.04170	733.20214	0.35232
3091	3213.92853	19.22624	13161.28091	428.01095	3.09243	0.19920	333.62754	0.87101
3092	4779.47694	10.39203	11644.94117	547.47924	-1.26950	0.01000	719.46504	0.14268
3093	4380.95616	18.72733	8625.02288	637.85615	1.06875	0.03686	697.66807	0.39437
3094	4648.18896	20.87955	8747.45342	605.71935	3.56207	0.09320	747.50635	0.51888
3095	4246.74995	19.01775	7262.93847	730.53533	3.66597	0.04588	793.36281	0.45656
3096	4341.81318	16.17464	9371.84862	421.21120	5.62407	0.09934	571.34129	0.44310
3097	3768.60812	9.58209	8349.27159	506.04812	0.33707	0.05396	525.37383	0.58685
3098	2950.88933	17.37236	15030.42424	317.69124	3.34448	0.21544	283.79319	0.78957
3099	4573.49334	10.36440	9294.02390	399.17267	-2.16871	0.03197	488.17329	0.28374
3100	4523.64651	19.94513	7358.97324	602.26202	1.49176	0.04580	741.25140	0.42418
3101	3977.29220	21.38343	14590.47599	74.07489	2.81830	0.01548	31.55901	1.11947
3102	4006.84497	21.01164	15063.11488	99.08581	2.31136	0.01610	62.92588	0.81084
3103	4878.77290	19.74771	11051.79878	227.48567	3.25267	0.07473	271.77524	0.35364
3104	2841.60583	15.14781	14615.72906	364.80955	4.86731	0.22883	269.66516	0.69621
3105	3506.68221	15.33789	11577.68343	441.01830	1.94467	0.09164	378.33472	0.50188
3106	3160.16828	16.94367	9568.65047	426.28104	3.31298	0.24066	306.65555	0.61268
3107	4928.47536	7.62695	9056.27531	368.26051	-3.61743	0.00051	543.23157	0.03233
3108	4759.72190	18.18863	10684.38307	455.53738	1.28069	0.03157	595.74914	0.38385
3109	3736.55461	13.09857	13573.83630	192.98937	-1.55764	0.00332	225.44565	0.29899
3110	4582.20962	18.00188	8207.09638	495.49677	1.31661	0.02762	664.92635	0.28527
3111	4575.91530	10.22642	9291.67784	416.35278	-3.52430	0.01970	532.01770	0.26425
3112	3182.40804	18.26404	10580.42929	458.59500	3.24224	0.17623	441.21498	0.77422
3113	3474.29646	13.90423	7306.79630	535.13541	2.69379	0.06500	440.99976	0.56268
3114	3858.35817	24.40665	6380.95675	812.03679	2.98678	0.01822	774.26348	0.58477
3115	4498.04162	21.27821	8794.02046	503.90040	5.65783	0.08309	566.42507	0.61491
3116	4411.25392	17.86540	7007.16040	602.92331	2.33326	0.04038	666.87591	0.42177
3117	3926.81362	20.02079	9521.00027	764.34651	6.27793	0.05406	682.48903	0.65022
3118	4642.36043	20.13180	9513.41280	377.07859	4.84613	0.04583	521.97956	0.34305

3119	4174.34317	18.94617	8216.91367	862.43323	1.72411	0.03317	881.86261	0.48118
3120	3710.34572	25.58445	8021.56901	91.96226	4.50462	0.00698	46.29873	1.15866
3121	5094.68178	9.85448	14659.40020	89.28495	-0.59975	0.00210	83.76111	0.33582
3122	4449.75402	20.41930	11014.64068	795.12880	3.56846	0.01660	968.06143	0.25306
3123	4911.60706	12.72907	7776.00314	347.48005	2.62386	0.03410	463.47831	0.31874
3124	4266.56742	16.16315	7777.68731	779.45687	2.40688	0.05424	824.51800	0.51395
3125	4761.31775	18.32667	10570.47423	618.45382	2.62282	0.04947	767.35512	0.31500
3126	4059.01264	19.61809	16494.02344	49.28363	1.84015	0.01821	12.61290	0.76810
3127	4843.55723	15.77594	10229.60643	346.74977	3.10401	0.02770	508.85441	0.26272
3128	2571.46727	15.20903	10815.82218	485.03828	4.88199	0.24374	469.26085	0.68011
3129	4789.63461	10.23096	11130.58631	573.86917	-0.09143	0.02545	733.43836	0.36681
3130	4084.49430	18.97769	6701.31984	717.62670	3.43178	0.07276	739.06784	0.60242
3131	4966.43013	9.95379	8590.84788	209.96978	1.00419	0.00433	298.08198	0.18291
3132	4238.67404	17.44533	7565.12001	720.47789	1.35313	0.02834	794.97535	0.45544
3133	3864.17162	23.97699	11298.71701	70.34427	2.64611	0.00568	23.21448	1.67463
3134	4504.52442	16.54174	8919.31114	581.70700	-0.84093	0.02753	692.56079	0.43057
3135	3913.70488	12.90817	12502.52766	324.78056	-0.29112	0.03188	372.91550	0.32058
3136	4037.34478	9.18475	11771.62176	231.98337	-1.85153	0.00652	320.42536	0.12047
3137	4961.56941	10.84739	10169.06928	100.53803	0.65839	0.00304	110.14871	0.28159
3138	4832.10481	14.38027	11289.87757	334.92315	3.58891	0.03128	501.47588	0.24315
3139	4423.45289	11.42792	8382.17421	519.42533	-2.13993	0.01069	637.25846	0.29631
3140	4465.15778	21.78692	8022.34280	605.27940	2.38356	0.02787	770.71025	0.32437
3141	4464.06655	21.77448	7638.64083	409.04757	4.56806	0.03792	505.91421	0.24846
3142	4123.20265	12.02407	13633.03214	89.80112	-2.38965	0.00201	63.98681	1.40891
3143	3678.85568	7.66365	5914.98619	363.57710	0.06028	0.02326	363.11731	0.52836
3144	3657.14200	23.85256	10496.44552	1078.65771	6.94724	0.06956	906.43341	1.15869
3145	3539.41615	16.68301	17360.07448	397.38429	1.56059	0.12975	321.18858	0.78421
3146	4897.25335	9.56465	10174.26570	486.60874	-1.08299	0.02212	640.30160	0.37058
3147	4847.36394	13.31046	10775.64196	395.07604	3.02746	0.02402	593.50355	0.29933
3148	3856.50433	23.84785	7226.55752	713.21763	6.38924	0.06472	748.06769	0.43420
3149	3766.02397	11.90564	9262.90460	707.27525	2.33727	0.03305	686.83401	0.66840
3150	4292.98020	16.95896	19249.47083	70.92210	2.10857	0.01429	32.14480	1.10799
3151	4333.17036	17.26887	8151.71834	555.34599	2.77243	0.04070	589.42044	0.35270
3152	3838.65320	20.22407	6319.14174	785.91016	2.17944	0.02465	791.99534	0.37978
3153	4771.20855	18.45860	10686.89955	735.41315	1.64038	0.03373	933.06459	0.37820
3154	3384.55731	24.42280	11995.93858	488.75082	2.91282	0.05197	366.69092	0.66136
3155	4770.20712	8.17837	9891.30701	308.27225	-4.33974	0.00267	443.94750	0.06900
3156	4146.98347	16.37301	8961.45454	548.07836	-0.88018	0.01871	608.74523	0.45672
3157	4991.28121	6.99424	9317.97651	297.58700	-4.66647	0.00024	429.94224	0.03082
3158	3599.49318	13.05433	24889.19713	313.18961	1.56884	0.01493	369.02190	0.30378
3159	4464.94614	21.78877	7664.35158	500.35569	3.68035	0.03701	642.59798	0.22356
3160	4365.70868	18.84540	9566.06415	508.66515	2.64212	0.04795	588.21064	0.38800
3161	4847.34580	13.30880	11062.52886	362.22495	2.03376	0.02213	543.72057	0.28455
3162	4553.77597	22.52612	12733.70848	523.10214	4.63201	0.02632	649.33418	0.38490
3163	4348.16821	18.81965	7877.23908	562.26510	4.89336	0.10381	691.37851	0.49454
3164	3776.49198	12.11531	9410.45701	557.41049	-0.00915	0.02898	556.90480	0.49672
3165	3670.35766	14.09888	9936.70014	417.36199	1.83194	0.06531	414.07297	0.66798
3166	5019.16766	13.77679	8456.70060	335.00112	1.89055	0.01562	490.82952	0.19080
3167	4706.54807	19.16744	9942.82274	516.72185	-0.71755	0.04342	665.67548	0.28812
3168	4145.88057	16.44265	8934.02274	673.81570	0.09441	0.01935	752.51154	0.39552
3169	5003.06960	7.78545	14887.18973	189.99325	-1.19502	0.00183	279.89598	0.08577
3170	4846.03258	13.58147	12131.52467	556.23913	2.23326	0.03546	708.74362	0.45603
3171	4425.62019	11.53601	8408.48253	480.97089	-1.98974	0.01081	600.63064	0.26991
3172	4079.23435	21.82855	8927.39623	622.05079	1.85386	0.03027	631.09387	0.50902
3173	3437.40782	8.17005	13789.22912	300.01086	1.41378	0.03483	306.17302	0.35891
3174	3376.48661	20.20318	10336.66045	178.53733	5.01255	0.01902	178.31605	1.00636
3175	4612.98708	22.34955	8681.19518	525.63381	2.26646	0.04394	645.94782	0.43797
3176	5010.75447	6.81065	11183.97916	273.42483	-3.24966	0.00102	409.88767	0.03903
3177	2906.58812	16.20315	14883.79685	434.95132	4.84661	0.20563	431.21892	0.57687
3178	3345.68270	24.28962	10871.66802	861.90635	8.97441	0.21433	482.28702	2.00204
3179	4911.13697	13.65675	8083.82642	480.52055	3.05304	0.01762	705.16285	0.21023
3180	4904.48510	13.49062	8067.77159	499.43385	2.34600	0.01669	725.00770	0.21797
3181	4418.88341	16.92406	10233.97258	576.53885	5.68580	0.08051	757.64509	0.60202
3182	3535.26563	17.40783	7930.08956	393.28310	0.45715	0.05487	381.23490	0.56993
3183	4569.03225	22.53776	13098.27612	433.67458	5.12271	0.02556	541.52441	0.42163
3184	3740.61572	11.70757	7553.82810	825.20285	2.92383	0.02660	795.86467	0.52758
3185	5009.34910	10.09811	8303.69416	290.91980	1.86132	0.00608	425.72851	0.11881
3186	4281.55817	14.22984	6831.67159	523.99507	-1.11254	0.02422	568.91983	0.38849
3187	4609.13168	18.88358	7972.14927	453.58775	4.71835	0.03905	611.68907	0.25059
3188	4635.11325	15.37454	10159.03756	341.09139	4.08830	0.08152	464.96009	0.43259
3189	3736.06004	11.64778	8701.46339	693.25427	1.92301	0.03298	689.72830	0.54784

3190	4885.93282	9.34648	12605.02558	419.27478	3.87400	0.02164	623.36883	0.22224
3191	4280.24828	14.19892	6851.02947	679.98395	0.38681	0.03133	777.65490	0.36627
3192	5021.05231	13.82713	8451.36728	277.96839	2.63034	0.01654	407.86300	0.20274
3193	4573.96085	10.45007	9311.22743	423.28404	-3.26820	0.01992	540.31144	0.20470
3194	3947.61564	20.03042	9576.39769	559.94292	5.67439	0.05200	444.67989	0.67600
3195	4712.29395	15.85037	11391.47955	485.32427	4.49133	0.05622	640.39811	0.34201
3196	4615.69586	22.39555	8671.25736	673.90894	1.71994	0.04581	840.37856	0.37712
3197	4430.29961	14.64133	6228.72551	690.31343	3.43773	0.02766	779.04509	0.33544
3198	3379.85464	9.59233	6921.32862	386.96142	2.65814	0.05077	347.93951	0.50917
3199	3917.25715	12.98288	12073.00262	389.98663	-0.23042	0.03086	429.15763	0.46815
3200	4281.67764	17.72707	7485.36559	819.24373	2.41729	0.04175	891.60173	0.50228
3201	5118.05932	10.98971	9833.58487	62.62575	-3.36307	0.00073	41.61275	0.70193
3202	4977.91875	9.90946	9388.96275	337.22989	-1.10267	0.00703	469.81569	0.14620
3203	4504.62584	16.54498	8920.15317	426.08340	-0.53049	0.02765	488.69203	0.42865
3204	2557.43960	15.74023	11678.02750	429.80105	5.89538	0.23931	348.48177	0.33347
3205	4506.82682	16.69462	8857.50734	463.12249	0.61317	0.03315	512.84876	0.33984
3206	4889.87448	9.43375	12736.97158	371.64177	2.86060	0.01909	558.78222	0.26921
3207	4713.44562	15.86248	11394.61878	554.94794	4.08491	0.05670	749.48160	0.36366
3208	4630.72298	7.75205	16309.28629	120.56367	-0.56518	0.00003	141.96098	0.09694
3209	4620.66867	7.79736	16875.24363	132.95180	-4.01916	0.00002	164.51635	0.07404
3210	4898.98255	16.87160	8799.38135	494.85469	2.30107	0.04389	649.30065	0.42029
3211	3832.35835	15.77980	8632.67793	536.75201	1.64665	0.03484	507.61612	0.52171
3212	3425.52821	8.06674	13609.22042	317.08962	1.93787	0.03713	291.57565	0.42640
3213	5002.94416	7.78229	13758.12314	186.89587	-0.91445	0.00203	271.01479	0.07278
3214	4298.22245	10.79343	10400.41393	152.20040	-2.19003	0.00021	186.84744	0.71330
3215	2963.73483	24.99671	6965.23325	485.26190	6.30389	0.17868	233.00404	0.92877
3216	5022.45389	18.23318	9219.48214	329.29833	2.41931	0.01741	466.71479	0.21918
3217	4287.18239	17.64769	7507.53486	732.92895	3.47591	0.04460	759.46337	0.42818
3218	4218.76694	11.81206	11608.84054	138.69982	-1.07625	0.00099	143.18246	0.73673
3219	3534.74265	17.40530	7953.94842	383.75423	0.43075	0.04725	344.83277	0.58577
3220	3864.16572	23.89662	12147.36929	767.89934	7.52498	0.02098	903.72033	0.06614
3221	3753.23016	12.23227	6483.92160	324.39916	-2.17207	0.01643	329.87627	0.39319
3222	4334.27907	18.59609	7800.21684	477.28910	4.97142	0.08268	589.35674	0.45293
3223	4843.80092	12.55961	13091.73354	300.55530	2.27926	0.02258	408.01509	0.32824
3224	3913.37498	12.96777	12049.52169	339.60438	0.25475	0.03780	340.27515	0.43915
3225	3392.91593	11.71675	7599.40310	429.04026	1.67744	0.08661	301.88783	0.58361
3226	5020.02314	13.80311	8424.49913	414.87483	2.07871	0.01675	613.97282	0.20607
3227	4852.04132	13.67252	11907.65153	341.81680	2.96338	0.04052	414.99149	0.48924
3228	4968.34546	9.88573	8843.90719	341.80996	1.45646	0.00769	478.02032	0.16330
3229	4709.44009	19.22747	12652.68849	446.93929	3.67575	0.07924	593.49523	0.55361
3230	3735.60782	21.46129	12065.97288	89.39946	3.56535	0.01349	41.03935	0.80213
3231	4911.72579	12.72553	7779.00602	380.73021	2.90496	0.03466	514.54459	0.32340
3232	4958.75687	6.66779	9713.73148	406.25089	-0.61987	0.00844	584.33518	0.18990
3233	5024.69107	18.12687	10148.34599	466.40507	2.66693	0.01552	667.25812	0.24780
3234	3428.56631	8.07840	13600.80950	322.43625	2.04913	0.03361	328.30483	0.42679
3235	4689.09652	13.73608	9805.68006	437.45213	3.53340	0.02115	520.96749	0.24180
3236	4496.88619	12.63128	9338.62779	641.98990	-0.22656	0.02449	757.71931	0.28877
3237	2974.66153	25.04737	7102.04443	454.43006	6.55134	0.17557	203.58049	0.92015
3238	4885.63593	9.31684	12448.17127	365.90003	1.19163	0.01634	539.93602	0.27385
3239	4952.01827	10.75924	10210.48284	144.32394	-0.03369	0.00323	178.52377	0.29179
3240	3255.81165	19.82720	13540.51623	399.01140	2.00376	0.17766	353.02124	0.90541
3241	4061.51730	9.08341	11640.44105	200.53719	-1.44538	0.00525	268.14100	0.10877
3242	4472.07757	20.46573	13686.80766	490.66927	4.20439	0.10170	604.30074	0.47595
3243	3786.04572	19.91702	9519.80428	540.92529	-0.51688	0.03308	519.99114	1.25591
3244	4569.40200	22.55429	13123.38305	590.56030	4.80416	0.02529	740.44632	0.38725
3245	4239.99221	17.39418	7587.12402	464.55778	-0.25863	0.02171	500.87753	0.52009
3246	3489.18861	13.80322	7413.38290	566.23227	0.27603	0.05199	531.84728	0.71754
3247	4774.34098	10.20287	11719.89646	447.93286	-1.74847	0.00769	605.41496	0.11616
3248	4505.43094	16.72531	8828.79983	591.43144	0.14973	0.03006	722.51290	0.29312
3249	4628.72335	7.75335	16236.26771	126.26204	-1.49630	0.00003	156.19214	0.06989
3250	3173.39830	15.88165	12167.06356	412.99564	3.31098	0.10284	389.48405	0.76203
3251	4483.15646	20.67903	9741.80495	455.21062	5.03253	0.10589	536.39462	0.53934
3252	3654.47070	22.04283	12349.18788	118.78011	3.19729	0.01500	77.40681	0.69251
3253	3703.32161	7.83299	6093.23427	384.19481	-2.12740	0.02113	394.15523	0.50489
3254	4344.49174	16.22967	9345.47496	369.15709	6.54073	0.07511	508.96410	0.44614
3255	2925.97062	20.00514	8243.80296	601.18958	4.20899	0.27912	485.54805	1.07354
3256	4239.55351	17.41764	7576.36228	636.98093	0.38038	0.02434	731.53818	0.48272
3257	4851.80448	13.64677	11914.33725	371.20597	2.64902	0.03899	456.30103	0.49414
3258	2558.21716	14.86702	4085.60073	398.35535	5.71238	0.29510	357.29918	1.65419
3259	4656.87849	7.56453	19419.18056	132.07411	-4.43694	0.00003	169.25309	0.13736
3260	4322.18786	21.89029	8614.96531	734.56600	2.67247	0.03634	756.53251	0.53615

3261	3776.47122	9.57853	8278.87986	471.83883	-1.25001	0.04503	456.21549	0.64234
3262	4633.20183	15.36227	10175.69424	416.62991	3.84821	0.08111	579.79045	0.44342
3263	4467.73183	22.72612	7114.91148	547.13238	5.19583	0.15663	634.54294	0.64124
3264	3129.72870	15.60401	6668.96688	265.37747	2.59721	0.01106	182.08533	0.25291
3265	4334.67396	18.25994	6880.53421	481.85718	4.11112	0.03285	495.97401	0.50132
3266	4661.64732	18.77366	12232.93286	499.26576	6.05473	0.04645	625.51804	0.35684
3267	2971.89703	16.96648	15570.57808	369.06622	2.88603	0.14066	365.75395	0.83720
3268	3379.53961	9.60386	6913.54874	515.33880	2.67501	0.06996	515.17280	0.54645
3269	4921.34280	13.84950	8015.92456	528.72015	4.21685	0.01862	768.64181	0.18525
3270	3241.74821	18.30093	18196.55000	483.15910	3.46184	0.20771	417.33506	1.12192
3271	4412.43139	22.73304	8357.95876	578.42591	3.10060	0.01407	750.73328	0.30316
3272	4911.78179	12.72872	7781.71517	344.97063	1.76407	0.03581	459.92353	0.32915
3273	4967.93466	9.97319	8788.89093	273.89586	1.98487	0.00423	404.91250	0.19090
3274	3179.10441	15.84989	9654.87453	513.70075	3.15621	0.20061	399.87296	0.71798
3275	4632.40701	20.65775	9198.33831	589.29438	3.66807	0.07861	728.07174	0.50358
3276	3915.62686	12.97530	12068.90348	470.51058	0.21103	0.03358	545.46739	0.44645
3277	4298.93848	15.20984	12172.71403	407.24560	-1.94126	0.01718	485.24124	0.32953
3278	4410.71251	17.89902	7008.73736	609.51994	1.76282	0.03378	663.39305	0.43026
3279	3860.20792	24.00887	12303.99685	845.95264	5.73686	0.01678	814.37245	0.04693
3280	2939.37347	26.33025	12771.32585	673.52705	5.58272	0.11055	436.04216	1.62719
3281	3901.27500	24.65020	10020.52794	1094.74452	8.15955	0.01534	998.78226	0.27281
3282	4422.22889	16.97803	10265.81880	328.59681	4.28315	0.07287	417.03671	0.60629
3283	4468.27311	20.43935	10336.56244	665.62764	3.75114	0.01867	807.38690	0.30957
3284	4888.63471	19.85025	11157.72028	419.23963	2.93197	0.06176	569.35482	0.38862
3285	4852.06800	13.66924	11896.27138	565.14675	1.80392	0.03714	717.37132	0.47729
3286	3993.17049	22.89992	7934.52645	806.25040	2.48958	0.03271	842.18544	0.54400
3287	5274.94002	15.64917	11635.21897	42.70664	-3.16119	0.00013	18.49555	1.40009
3288	4636.95035	15.39787	10155.90262	303.00421	4.89208	0.09713	410.57737	0.45043
3289	4687.24450	21.35015	17485.16830	450.59463	4.66698	0.06535	559.27334	0.60294
3290	4547.55887	16.04704	11307.27224	353.47034	4.52427	0.07602	498.08628	0.39071
3291	3905.42430	24.72705	10054.70791	798.89613	6.14799	0.01431	780.87360	0.34910
3292	3735.38763	11.59496	8708.88164	429.60582	0.45541	0.03104	371.94240	0.58985
3293	4851.18919	13.63643	11910.72342	447.85246	2.24354	0.03891	580.40863	0.50004
3294	4972.23339	8.57282	9429.81336	281.53224	-0.91754	0.00295	414.68399	0.12618
3295	3126.31564	18.13291	10416.01592	362.20142	3.49539	0.17924	277.38642	0.79814
3296	4977.87196	9.90827	8919.21931	360.21952	0.68771	0.00600	503.09280	0.15075
3297	4782.45411	16.51485	9808.26361	637.68815	-0.11021	0.02832	826.09776	0.38743
3298	4897.09515	9.55253	10177.37092	562.91871	-1.04469	0.02151	747.36640	0.35413
3299	4680.11881	21.50168	9186.44344	498.73916	3.81664	0.05683	609.11097	0.51696
3300	4748.50794	16.00183	21031.94492	286.07898	2.72742	0.05483	371.67039	0.65104
3301	3851.98048	24.38416	6301.51160	822.40175	3.29659	0.02076	875.62925	0.80686
3302	2546.95617	14.92310	3851.73418	416.29666	5.12461	0.29741	366.83297	1.61909
3303	4297.81335	15.20912	12152.75538	469.43793	-1.25584	0.01885	532.37527	0.31413
3304	4894.03423	9.47539	10013.91981	506.77800	0.15735	0.02543	647.97259	0.39062
3305	3215.51545	16.54080	12170.87616	405.55618	3.13974	0.08249	353.71510	0.79955
3306	3532.95697	23.34851	9138.44793	1446.60188	7.19796	0.07654	1158.56606	1.28007
3307	4967.30051	8.62558	9994.17071	259.15814	-2.10454	0.00302	375.58537	0.11650
3308	3215.57234	16.53383	12171.84737	333.25104	3.60080	0.08078	265.12439	0.80158
3309	4823.59242	20.86278	7813.06479	625.60319	3.92275	0.05001	756.65943	0.40951
3310	4871.19206	9.13343	9442.17927	110.42020	0.31685	0.00353	106.65646	0.71499
3311	2926.71118	26.34471	12686.03398	570.95884	6.97213	0.13804	299.71449	1.55227
3312	4196.45608	21.00959	10541.19352	616.69589	1.64884	0.03432	628.44626	0.51562
3313	4889.00891	9.38224	12721.03518	439.79569	2.72028	0.01535	661.13674	0.27339
3314	4424.45344	11.48579	8420.52837	651.47972	0.96410	0.01574	774.54074	0.19520
3315	4576.19327	10.21935	9305.60541	496.69699	-3.26627	0.01926	631.27914	0.29855
3316	4264.46539	23.21563	13454.33636	1075.05153	3.89612	0.00948	1227.04414	0.12559
3317	5024.29525	18.12019	10151.54942	544.10402	2.59579	0.01578	768.44911	0.24946
3318	4293.74793	15.04647	12164.22937	465.54062	-3.57383	0.01790	553.40175	0.37178
3319	4313.35395	21.87800	8563.09324	740.07666	2.81188	0.03268	778.51880	0.56044
3320	2929.99609	16.64496	15195.35739	281.24348	3.90442	0.19367	268.18146	0.68584
3321	4795.42554	10.38929	11120.87086	589.80645	0.85738	0.03224	738.87763	0.43414
3322	4919.60622	10.81534	8919.30006	139.26661	1.02389	0.00482	179.59060	0.12422
3323	3742.02637	11.75516	7573.67265	743.74868	2.47201	0.02491	737.30760	0.51867
3324	3576.93843	13.31724	5259.35940	569.42093	2.23006	0.03439	514.80575	0.72093
3325	4294.11028	15.00402	12180.64544	410.99267	-2.72156	0.01750	476.37995	0.37254
3326	4433.07822	20.21682	8151.60654	573.02775	5.04746	0.12566	637.54743	0.54967
3327	4658.86502	19.54452	11870.19671	283.48431	5.00562	0.09806	366.89933	0.49110
3328	4294.19036	15.02609	12173.41281	424.25157	-2.42631	0.01775	496.56114	0.37923
3329	3527.12929	17.29488	7913.73823	326.88388	1.11611	0.05859	292.20423	0.59248
3330	2446.46289	13.50482	3720.01967	334.45166	5.73609	0.24711	420.05229	0.67314
3331	3187.49699	16.61601	7079.45813	424.29454	1.98252	0.09227	369.10054	0.71387

3332	4883.90294	19.80269	11105.32005	556.91622	2.37862	0.06681	762.59936	0.39215
3333	4195.91098	21.01317	10524.75310	730.64350	2.96182	0.03373	738.38234	0.48551
3334	4798.44629	16.82669	9915.25416	508.25616	0.61690	0.03407	674.42307	0.44790
3335	3683.03471	22.05685	12000.98635	122.55923	4.49703	0.01695	75.71079	0.70254
3336	4897.27961	13.45130	8143.18749	349.36710	1.37567	0.01658	506.67218	0.24078
3337	5022.32164	18.22987	10075.18396	415.89898	1.62029	0.01734	600.13016	0.19842
3338	4431.32203	15.52712	6481.01486	684.61246	2.88784	0.02751	758.55619	0.34561
3339	4616.53695	18.63935	8328.28720	438.32796	3.47607	0.03286	562.58881	0.36432
3340	3538.94007	9.38229	7262.03871	602.68893	2.19934	0.04347	572.85916	0.68963
3341	4656.46619	19.50544	12289.13112	401.17954	4.47899	0.10714	533.54214	0.42907
3342	3611.77633	12.41825	30888.71823	274.16312	1.32522	0.01693	282.12654	0.44966
3343	4847.35777	13.59988	12181.93941	435.75808	0.32582	0.03523	548.62948	0.45877
3344	2492.81573	14.32104	3918.72222	488.21892	5.03321	0.30421	515.67327	0.56781
3345	4783.55609	16.53591	9814.46205	475.95153	-1.39382	0.03019	630.08572	0.30259
3346	4425.55641	17.35585	10710.62864	698.38147	2.24950	0.03529	763.43674	0.36490
3347	4520.67634	19.90562	7349.93947	612.34763	2.05222	0.04990	733.52270	0.44760
3348	4244.79719	17.30052	7631.72921	582.69835	-0.89428	0.02151	651.42333	0.48769
3349	4442.02691	20.45769	8218.89020	397.58844	6.09064	0.09479	424.32587	0.52278
3350	4369.85051	18.86231	9577.24025	557.74051	3.41696	0.05273	622.93203	0.35591
3351	4449.91322	19.79108	8015.18087	413.65772	6.15725	0.07837	474.48665	0.59865
3352	3684.07884	25.46936	11860.98855	68.59396	3.15204	0.01001	23.38639	1.68542
3353	4885.64051	9.31712	12500.54095	447.22124	2.36789	0.01796	660.20559	0.27335
3354	3784.67207	13.15279	11695.71462	125.41420	-1.76801	0.00495	102.69410	0.80656
3355	4575.99436	7.78037	8834.92617	256.57174	-4.39524	0.00560	335.58732	0.10322
3356	3839.75514	20.21019	6338.90812	694.94074	1.82266	0.02403	696.85124	0.49951
3357	4295.61647	15.04417	12345.18590	490.54559	-2.97591	0.01785	581.19707	0.38476
3358	4856.81220	15.85924	8388.16226	380.38583	5.48095	0.03200	564.96883	0.19574
3359	4672.44399	18.84521	12273.41442	421.48334	5.33415	0.03821	528.69414	0.38603
3360	4696.66916	18.28049	16708.11556	378.33124	4.38184	0.02896	485.37147	0.16759
3361	5020.19978	13.79268	8445.21609	404.58456	1.82207	0.01619	597.69340	0.18767
3362	3627.27407	17.40968	17083.26173	437.07690	-0.65555	0.10093	414.21938	0.96666
3363	4984.33913	7.18778	16223.69291	124.38306	-1.79552	0.00179	154.85595	0.12624
3364	4523.54548	19.93120	7366.79064	543.19327	2.22293	0.04701	655.32094	0.44689
3365	3858.04650	24.40082	6383.27652	771.08136	2.84283	0.01941	728.62583	0.50678
3366	4425.79791	11.52337	8403.34874	579.27068	-0.66289	0.01153	735.22749	0.24779
3367	3234.28850	18.12637	18078.22871	474.25199	1.96261	0.19243	389.50063	1.13359
3368	4613.63937	22.35946	8687.86543	531.23963	3.01512	0.04371	622.85207	0.43643
3369	4280.89184	14.22190	6848.30834	594.18607	0.37227	0.03016	669.88018	0.35484
3370	4642.02980	22.37937	9727.58885	643.72294	2.86921	0.03684	816.77631	0.47398
3371	4770.85358	18.45604	10666.00514	656.49297	1.00862	0.03525	847.81545	0.34435
3372	3769.52192	9.61765	8365.39502	511.88283	0.55736	0.05508	522.38291	0.57807
3373	4667.81327	16.50711	16607.95314	413.15495	5.68311	0.09830	564.05176	0.44379
3374	3384.77126	18.24294	19329.69899	355.32450	0.73788	0.08528	267.77804	0.70171
3375	3741.62949	11.73087	7573.25775	608.25832	1.95715	0.02486	564.71923	0.54884
3376	4616.43520	18.62570	8325.30402	375.48574	4.24028	0.03090	475.42279	0.36023
3377	4374.39743	20.37305	9974.56553	564.87545	2.31787	0.03919	640.33360	0.43764
3378	4367.33202	18.89437	9561.79700	503.99530	2.62223	0.04467	562.99775	0.37692
3379	4823.27917	20.85310	7780.72090	448.48458	3.96928	0.04620	550.95781	0.41969
3380	4972.89568	8.58063	9206.69855	225.86026	0.13818	0.00358	327.78762	0.09838
3381	2923.16550	16.76255	14660.88060	417.01629	3.33635	0.24821	346.79828	0.72458
3382	4851.39854	13.64145	11978.02446	522.21668	1.31598	0.03680	675.94257	0.43694
3383	4675.59497	18.86473	12285.62628	333.83472	5.79064	0.04421	391.86877	0.37753
3384	4885.76823	9.31558	12446.32141	399.08939	1.53124	0.01591	585.65635	0.28111
3385	3504.70363	9.33710	7996.16206	424.87997	-0.07558	0.03638	380.78075	0.48043
3386	5024.67437	18.12389	10121.70619	341.46933	2.35587	0.01508	486.42637	0.25875
3387	4536.76093	20.23756	24739.90840	349.27342	6.02696	0.08718	440.95330	0.36073
3388	4975.44960	10.30281	8714.98778	254.98948	2.51298	0.00475	374.46438	0.12350
3389	4270.89489	23.22610	13441.75537	520.78418	4.76974	0.00957	610.41053	0.12681
3390	4774.30491	10.20638	11813.22217	521.01249	-1.31990	0.00785	704.08209	0.12141
3391	4969.13835	9.90980	8895.74535	451.83533	1.77409	0.00884	635.90394	0.14602
3392	4553.44783	17.76976	8338.20835	507.88632	2.71918	0.02737	667.00986	0.30962
3393	2789.52241	14.56308	13641.69082	447.98551	5.20963	0.25257	416.07576	0.72019
3394	3142.39635	17.18040	9510.79757	515.85878	3.60155	0.15636	440.46635	0.66128
3395	4967.44384	9.96823	8628.33190	269.05170	1.33725	0.00443	400.06046	0.19367
3396	4425.61235	11.53081	8415.48291	596.31777	-1.49656	0.01233	724.59101	0.20028
3397	4576.12444	7.78133	8840.08460	278.24491	-3.40053	0.00544	367.43148	0.10239
3398	4844.19315	12.69931	15143.30512	426.23207	3.43399	0.02525	591.89271	0.31495
3399	3673.53454	21.38169	12773.70271	101.41194	3.24482	0.01320	58.93941	0.80628
3400	3168.87670	16.78115	9612.17999	473.39891	3.44156	0.23734	386.66726	0.62524
3401	4769.38433	8.14280	9538.26840	309.69680	-1.82254	0.00278	447.44324	0.06371
3402	4570.69430	20.67336	16974.81689	402.99772	6.11399	0.09478	497.61598	0.49537

3403	4606.66939	18.88009	8425.02436	484.57365	3.88858	0.03780	637.49821	0.29535
3404	3216.56483	16.52559	12179.77773	380.95897	2.37737	0.08530	314.25957	0.80377
3405	4441.33090	21.72841	7909.66287	428.76954	1.75309	0.03009	532.23730	0.30886
3406	4879.05370	7.74311	9993.31165	296.68558	-1.03868	0.00823	371.89402	0.25293
3407	4265.81429	16.19170	7767.71698	742.36038	1.66653	0.05255	772.82089	0.50219
3408	4425.77756	11.52502	8402.35863	655.82052	-1.47452	0.01204	797.29115	0.23582
3409	4713.29745	15.84838	11379.61155	288.76206	5.47976	0.05465	353.03045	0.37567
3410	4265.01172	14.46127	14857.39092	93.31536	-1.63050	0.00186	86.16872	1.02797
3411	3911.75166	12.94925	12043.65120	489.31798	1.44723	0.03781	568.38223	0.43673
3412	3610.86548	13.24489	20582.74725	223.87942	1.53604	0.01637	239.27004	0.26792
3413	3551.89592	16.83560	17598.70157	433.33208	0.77576	0.15066	397.90241	0.70143
3414	4540.41698	20.29327	24867.72194	417.49172	5.97787	0.09782	545.94392	0.34844
3415	4086.00696	20.23492	14873.70408	103.97434	3.43804	0.01338	64.24539	0.68669
3416	3539.55805	23.37846	9170.18955	918.22900	8.69596	0.06304	689.61248	1.28208
3417	4568.68194	20.65783	17249.39923	584.48002	5.09373	0.09736	749.03403	0.49236
3418	4196.43141	23.79458	8470.32749	671.62746	2.46126	0.05339	710.61429	0.59718
3419	4898.97917	16.86879	8797.88277	499.57892	3.45265	0.05358	656.42015	0.42683
3420	5020.37137	13.78617	8448.46141	318.03059	1.89031	0.01558	461.51117	0.18262
3421	2523.80283	26.13411	10896.57956	731.45714	8.66865	0.18920	456.67542	1.03158
3422	4843.57092	12.55916	12835.48123	364.84298	3.93913	0.02484	508.18072	0.33084
3423	2448.35098	13.80191	3847.99400	353.30922	6.03246	0.24203	390.76085	0.69315
3424	4440.67692	21.74436	7587.61868	587.98833	2.69651	0.03063	740.54763	0.30874
3425	4367.33374	18.88704	9568.00340	488.35612	2.79815	0.04384	544.11662	0.34816
3426	3118.70376	18.11886	10294.35916	464.75347	3.17756	0.17244	402.11025	0.79690
3427	4704.26130	19.16031	9952.63649	609.22001	0.79181	0.04216	779.50932	0.29971
3428	3835.63439	23.93676	7110.44446	633.77618	7.87119	0.07338	634.40680	0.35505
3429	3893.35855	13.37582	11285.01598	366.01056	-1.11919	0.03154	384.16795	0.44410
3430	5011.94479	6.80771	9326.29865	246.01576	-2.53726	0.00118	373.22684	0.03324
3431	3532.51645	15.27412	11886.84943	390.15401	1.91770	0.07017	323.66751	0.52318
3432	4150.95159	12.79874	12832.85211	262.75148	-1.05121	0.00531	343.81312	0.11676
3433	4449.64542	20.37251	11005.71775	593.20820	4.13931	0.01741	701.80945	0.26695
3434	4201.39171	24.76872	8170.42868	841.49167	2.81358	0.02705	884.41612	0.42906
3435	4978.06562	9.90940	8921.70721	451.58736	0.75873	0.00610	634.44531	0.15305
3436	3756.96721	12.49187	6503.75286	336.66096	-2.09091	0.01343	334.28275	0.41390
3437	4650.70471	22.41083	9724.19944	729.34374	2.42587	0.03331	919.38322	0.43225
3438	4604.86486	18.84360	7946.26210	375.76770	4.92091	0.03545	483.01189	0.26956
3439	4606.47236	22.29969	8637.78434	554.91281	2.58597	0.05932	672.56032	0.35333
3440	4522.62777	19.93544	7352.93592	556.76067	1.55396	0.04829	679.23984	0.42905
3441	3848.89642	24.37884	6299.05706	970.61168	3.71029	0.01734	926.34177	0.80361
3442	4850.88569	13.64697	11981.29515	530.66779	1.52078	0.03823	682.56985	0.46806
3443	3673.00988	14.11430	10021.55417	377.95089	0.74154	0.05968	356.68034	0.51985
3444	4497.63016	21.26719	8789.73511	523.47253	5.93785	0.10030	591.01733	0.60162
3445	4847.00502	13.30188	11074.27076	390.51598	2.02240	0.02250	585.76991	0.28332
3446	4878.68763	16.87194	8592.34468	441.53312	3.09964	0.05387	584.11656	0.41441
3447	4003.90783	9.87802	9280.82367	357.79805	-1.62016	0.00659	466.37072	0.18607
3448	4713.44562	15.86248	11394.61878	554.94794	4.08491	0.05670	749.48160	0.36366
3449	4794.39780	10.38027	11080.80919	579.29953	2.51327	0.03992	712.81262	0.41073
3450	4575.71085	18.04689	8244.87747	504.60978	3.01862	0.03026	661.98801	0.24814
3451	5008.90445	10.08954	9264.29912	290.86094	1.01056	0.00501	434.55313	0.14601
3452	4004.06183	9.93356	9310.41843	355.64904	-2.01466	0.01007	457.15107	0.16550
3453	3135.99423	13.03744	8682.03979	466.99794	3.58964	0.30272	359.62096	0.74597
3454	3859.15810	24.40150	6393.31760	796.19761	3.75818	0.02257	761.28231	0.77398
3455	4669.91237	16.62891	18040.45076	269.52952	4.98397	0.08731	349.03758	0.48601
3456	4885.69856	7.82841	10160.65724	251.92360	-0.46311	0.00829	297.58560	0.23314
3457	4643.27734	20.09319	9496.12687	367.51365	3.94558	0.04355	504.53281	0.32364
3458	3766.16924	11.91197	9263.49613	585.41218	0.81809	0.03106	588.08585	0.49646
3459	4423.27934	11.47460	8366.86550	681.90122	-0.98555	0.01331	843.42816	0.16604
3460	3975.53943	22.96054	7882.64728	826.43909	3.00482	0.04303	888.14361	0.52327
3461	4481.41724	15.08678	23524.25367	72.56053	-0.56885	0.00026	44.03246	0.44063
3462	4890.14027	9.34298	10045.90236	542.76570	-1.50614	0.02205	710.16155	0.42800
3463	4968.35645	9.88145	8845.57143	307.08493	1.34119	0.00701	430.64162	0.14403
3464	3858.72329	24.39934	6383.25354	965.64704	2.26606	0.01956	913.69289	0.51951
3465	4887.22695	19.83348	11140.88002	352.66756	3.19862	0.05888	471.99699	0.39252
3466	4806.01254	16.94532	9968.20306	612.18127	-0.27858	0.03066	803.82760	0.31538
3467	4973.57902	8.60393	8947.13801	313.84936	0.65391	0.00410	468.92731	0.09597
3468	2533.36422	26.31244	11242.12299	572.14479	8.28153	0.17315	302.20013	1.37314
3469	4337.92408	19.41792	6379.41310	623.88365	1.14669	0.04585	711.67243	0.52037
3470	3131.08254	15.60084	6669.57641	306.29677	1.93901	0.01400	256.42580	0.22439
3471	4431.59776	15.51926	6376.25273	655.10491	2.76298	0.02809	755.47828	0.35832
3472	4921.71326	10.89758	8907.68389	199.80777	0.57687	0.00473	295.10506	0.14994
3473	4674.28524	18.85286	12292.39110	538.18386	2.91018	0.04659	685.67669	0.37702

3474	4769.05801	8.13348	9539.92241	278.20052	-2.52980	0.00299	377.56683	0.08313
3475	4894.13867	9.47127	10016.26711	497.49657	0.16333	0.02377	633.20997	0.39439
3476	4759.05010	8.22905	9959.12921	239.44615	-3.92999	0.00286	315.21355	0.10620
3477	3837.60917	23.93830	7104.71959	874.52547	7.32862	0.07187	909.77233	0.41156
3478	4431.58111	14.75066	6183.23746	629.97625	3.61475	0.02424	682.01694	0.33852
3479	4803.22678	15.95376	7161.70609	452.47127	5.68244	0.01565	664.96443	0.18751
3480	4547.98681	16.03212	11275.27412	281.75722	5.38901	0.07557	381.32335	0.38534
3481	4044.02139	9.09473	11138.92900	285.50416	-0.90798	0.00859	383.71938	0.15023
3482	4475.91746	22.79804	7112.68842	503.59273	4.90719	0.15588	582.80897	0.63848
3483	4525.45255	20.94489	15223.68669	639.11141	4.46451	0.01308	786.68790	0.25316
3484	4293.79440	15.03898	12163.80472	448.78664	-2.40460	0.01778	531.98985	0.37757
3485	3181.45400	16.49002	7075.25018	423.16614	2.46577	0.12151	303.27481	0.68111
3486	4504.36541	16.54077	9005.07856	462.82692	-1.44545	0.02894	536.73382	0.43808
3487	4715.86913	17.89546	15935.94377	333.01778	3.24126	0.02368	439.62453	0.21976
3488	4380.77483	18.74736	8620.57358	645.32122	2.46129	0.03654	709.17025	0.36814
3489	3997.40326	9.91139	9284.62299	313.09331	-0.42697	0.01354	371.39995	0.24954
3490	3132.49617	15.90256	6787.37502	299.00872	0.36854	0.01153	236.40411	0.29271
3491	4888.44259	19.85712	11148.56045	339.54213	3.83670	0.05418	466.60224	0.39089
3492	4712.31788	15.82738	11375.81369	379.24781	4.86448	0.05290	493.99496	0.35319
3493	4979.68057	17.64285	8070.80145	768.89406	1.10809	0.01936	988.03875	0.30776
3494	4291.35705	15.18820	12183.53150	527.36575	0.15447	0.02403	606.38286	0.25126
3495	4889.51236	19.88133	11154.79909	479.08881	2.99158	0.06490	653.67704	0.38561
3496	4748.58745	21.54871	19521.89322	518.62498	4.91590	0.03440	662.25315	0.37102
3497	3832.14685	15.76637	8631.67266	703.02861	1.66866	0.03426	706.47088	0.52235
3498	4774.33815	10.16609	11788.15646	541.53683	0.85598	0.01466	704.21492	0.13583
3499	4281.97882	14.24655	6824.50610	552.34200	-1.16119	0.02175	649.47648	0.44735
3500	3735.74880	11.60116	8713.43778	552.79207	1.10830	0.02984	551.95994	0.60453
3501	4349.74760	18.84360	7890.65343	455.50233	6.29944	0.10662	545.07290	0.48682
3502	4039.97331	25.74693	8861.49711	756.38083	2.32162	0.01545	755.70644	0.44073
3503	4820.89196	20.94664	7793.14188	688.94107	3.78702	0.04406	843.03145	0.40475
3504	4847.32013	13.30252	11079.56688	316.64955	2.40155	0.02139	471.51288	0.29015
3505	4973.69244	6.90229	8837.50834	262.65549	-5.00188	0.00025	375.50456	0.03566
3506	4834.39045	14.40878	11007.29692	401.65317	3.61321	0.02582	612.46541	0.23918
3507	4335.14829	17.16103	8157.38461	544.09664	2.42677	0.04428	582.01412	0.39345
3508	4972.63121	8.58031	9518.30139	244.75646	0.10712	0.00307	354.08964	0.12744
3509	4639.08554	15.42060	10121.82021	355.11418	3.79791	0.09865	493.85545	0.42660
3510	2517.96410	26.30437	11473.33178	642.76063	8.35864	0.18181	380.18415	1.36034
3511	4941.24583	13.04329	9343.67265	315.76226	1.63119	0.00932	468.49916	0.17067
3512	2895.20750	16.49246	14712.06339	342.58348	4.88357	0.18001	258.62177	0.66231
3513	5091.73032	13.32138	12497.26320	71.26425	-2.53188	0.00100	60.16650	0.40199
3514	4762.44128	14.79212	10440.04932	442.79098	4.42279	0.02399	641.33301	0.35214
3515	3315.15092	14.64364	11561.18144	335.77171	1.26602	0.05764	313.88602	0.60682
3516	3137.11505	16.79821	9546.65585	597.13166	2.24523	0.18896	545.98825	0.67643
3517	3709.48574	24.58843	6221.55944	739.58774	3.68835	0.05018	684.66765	0.48402
3518	4642.42132	20.78465	9181.98806	419.86292	4.97112	0.06532	510.88596	0.49767
3519	4893.69424	12.76269	7466.76745	334.95117	3.29576	0.03763	440.09032	0.31383
3520	4667.95330	10.79888	16333.04266	128.48067	0.95894	0.00911	145.20602	0.41466
3521	4281.48370	14.22071	6835.73320	643.03220	-1.38240	0.02493	728.34323	0.25313
3522	4571.30871	20.67590	17002.38222	475.26039	4.75060	0.09313	596.59880	0.48147
3523	3540.00939	9.40043	7454.12079	660.03651	2.17208	0.04151	635.66038	0.66296
3524	4820.37444	22.38743	11779.50969	587.80357	3.85910	0.01390	780.26188	0.32102
3525	4647.87911	20.86122	9228.64926	591.04912	4.37502	0.07735	714.06339	0.49917
3526	4240.74316	19.24753	7241.88704	610.29538	3.26818	0.04649	663.65290	0.44549
3527	3934.49929	18.64649	6894.52373	645.93975	7.11856	0.05671	535.29873	0.55722
3528	4492.00299	20.51685	16043.11540	734.72794	2.95159	0.01262	867.92381	0.43053
3529	5082.73146	13.27464	10115.10975	91.75112	-0.80393	0.00109	98.69604	0.38932
3530	4504.86252	21.00456	9941.86641	541.40908	5.11554	0.11157	685.76072	0.52261
3531	4708.44008	15.77085	11410.91090	403.72086	4.31868	0.04838	526.57998	0.38071
3532	3613.37558	17.66534	7331.37448	389.07915	-0.13100	0.05466	356.54186	0.85901
3533	4293.81647	15.02808	12169.50127	495.67811	-3.17580	0.01804	594.43991	0.38463
3534	4493.30948	12.55000	9301.82592	537.66289	-0.21026	0.02508	658.68511	0.25617
3535	3981.77743	22.95856	7919.13364	693.25848	3.23226	0.04165	716.66014	0.49806
3536	3217.27586	16.53218	12204.97491	387.93461	2.52517	0.08519	312.55480	0.73925
3537	3558.06166	16.86247	17771.74546	289.02393	0.40498	0.14731	219.81779	0.65835
3538	4057.20003	9.07190	11665.95750	247.09206	-1.55495	0.00543	351.30778	0.11044
3539	4819.24465	22.39119	11762.30388	564.62968	3.22219	0.01612	752.15054	0.28729
3540	4463.49863	19.61360	5662.53939	584.42139	3.18468	0.03105	671.81401	0.42144
3541	4763.13834	14.79706	11465.02386	343.04527	3.91081	0.02441	492.75627	0.35898
3542	4758.39083	14.71268	9486.62591	447.05862	4.54317	0.02741	648.19771	0.33918
3543	3735.65324	11.63980	8694.38434	475.33619	1.07539	0.03257	424.48987	0.61867
3544	2904.08812	16.54107	14823.26183	402.64808	4.53845	0.20138	348.78619	0.70330

3545	3510.81119	16.65601	16709.09175	464.44987	1.23124	0.15495	425.84713	0.78872
3546	2937.28695	26.32696	12753.61440	564.84902	6.05059	0.11216	335.66922	1.62288
3547	4383.11758	15.65077	10459.36830	42.85866	1.69601	0.00839	6.57247	1.08398
3548	3703.36163	7.83326	6094.41066	333.98627	-2.23006	0.02146	325.55195	0.51479
3549	4281.74193	14.23887	6831.89186	630.31684	-0.83829	0.02576	727.27280	0.39175
3550	4550.31917	16.04285	11320.64647	406.84846	4.68154	0.06922	570.44770	0.39514
3551	4682.60256	18.36585	16745.55779	430.23003	3.78263	0.03045	581.89281	0.17545
3552	3282.18841	18.65170	18814.69945	367.27066	2.10331	0.21943	261.85164	0.90395
3553	4797.14891	16.81371	9906.23711	684.06782	-0.19178	0.03547	903.06602	0.41293
3554	4941.81333	13.06269	9397.86870	437.60034	2.38639	0.01002	657.02236	0.14569
3555	3858.08131	24.40655	6384.89358	888.84902	2.87546	0.01808	844.95709	0.54948
3556	4848.53131	15.82438	8857.79515	409.75738	2.81003	0.02756	610.20212	0.26641
3557	4319.53579	14.75873	13613.55355	58.56816	0.54814	0.00366	16.84057	1.00818
3558	3135.60006	15.91007	6725.51245	278.93284	1.69422	0.01483	223.84673	0.28679
3559	3599.00010	13.03779	24902.55013	279.96735	1.09317	0.01666	325.23311	0.30919
3560	4465.01368	20.98245	9434.28389	385.06090	1.71806	0.04624	487.67113	0.39097
3561	4851.68040	15.84332	8850.32075	315.40370	3.65381	0.02897	466.85118	0.25505
3562	3337.43157	24.26377	11583.32966	625.04139	4.40384	0.06741	524.95193	0.72450
3563	3766.20211	11.90642	9276.46369	594.93658	1.38769	0.03167	602.77326	0.66120
3564	2534.31717	14.69818	3381.97256	419.50553	5.69780	0.28821	480.70090	1.77514
3565	4247.08649	19.01338	7270.45214	407.99056	3.55700	0.04289	398.39558	0.45662
3566	4617.11801	21.71412	15580.69500	467.54958	5.34509	0.06316	549.38676	0.52602
3567	3833.58771	15.80609	8633.94346	711.63358	2.40617	0.03095	679.38113	0.55867
3568	4704.86875	13.62144	9946.89545	338.37889	4.16372	0.01997	401.05921	0.24366
3569	3238.90317	18.24477	18149.00119	461.51403	3.06033	0.20758	371.18687	1.16191
3570	4000.74564	17.03700	5766.71141	327.91169	-2.80401	0.02680	346.83421	0.83331
3571	4606.58133	22.27550	8645.41215	469.84271	2.10606	0.03907	584.12861	0.39697
3572	4007.12520	13.41555	15853.26210	181.61465	-0.83228	0.00448	198.09843	0.56526
3573	5009.03410	10.08873	9274.60770	265.46126	1.15307	0.00511	381.51043	0.14541
3574	4479.65988	9.33004	10754.56464	79.52555	-3.86087	0.00173	77.72759	0.90025
3575	4438.47293	10.41487	10540.34342	77.89856	-2.21067	0.00163	68.36755	1.03025
3576	5009.03483	10.08883	9282.21719	331.50532	0.90594	0.00524	491.24067	0.13992
3577	4338.24631	17.13807	8208.76501	632.33294	2.69229	0.03726	681.41692	0.35850
3578	3694.91658	14.20255	10433.72107	450.37306	-0.63575	0.05314	443.31660	0.66063
3579	3133.30263	7.42193	5988.17072	601.56678	3.03140	0.26620	469.94001	0.71014
3580	3476.33057	13.90317	7307.62458	558.04701	1.50857	0.05637	483.00525	0.58151
3581	4970.52693	17.48773	8697.37712	677.29434	3.80381	0.02583	892.80228	0.31160
3582	4932.51818	7.62333	9905.38384	366.48599	-3.95461	0.00024	551.80122	0.02924
3583	3472.95704	13.91288	7288.84824	399.39108	1.64065	0.06414	309.03024	0.56474
3584	4969.18415	17.23289	8730.55792	474.55184	-0.08877	0.01860	626.58875	0.30270
3585	3548.19282	16.81164	17533.86005	418.84716	1.13549	0.14425	398.53140	0.66913
3586	3181.13606	24.97113	7847.36438	476.24608	4.39843	0.11724	252.72914	1.20470
3587	4568.62650	22.56678	12957.22348	655.23736	3.98654	0.02648	819.84216	0.39681
3588	4791.05402	10.25683	11227.72403	517.55363	-1.08275	0.02659	664.25224	0.41291
3589	3678.67294	7.64756	5913.90511	507.90964	-0.91169	0.02281	560.62889	0.52911
3590	4821.03231	20.94050	7793.64866	682.98896	2.72659	0.04146	836.30857	0.40775
3591	4829.09467	8.80497	9391.07214	104.25568	1.32897	0.00453	83.90621	0.66168
3592	4820.50775	22.40038	10514.99209	584.86855	2.20394	0.01603	798.93933	0.29088
3593	4919.02573	10.83122	8773.73339	130.12297	3.27586	0.00651	150.22570	0.08959
3594	4115.19096	12.51504	12286.63642	271.28030	-2.19502	0.00599	339.68566	0.31842
3595	4616.10847	22.41936	8674.42051	573.32249	2.08092	0.04258	713.90865	0.40154
3596	4971.63381	8.56128	9418.91064	271.63171	-1.39793	0.00285	399.18049	0.10849
3597	4344.06568	23.78452	10426.87570	837.31441	3.58708	0.03025	889.74542	0.55317
3598	3626.02882	17.35938	17120.86916	357.93825	-0.84235	0.10278	299.34177	0.97045
3599	4573.58273	7.63708	8696.42359	330.72327	-2.54099	0.00404	460.25668	0.07898
3600	4432.28255	14.63638	6177.33256	565.18476	4.24829	0.02857	590.08815	0.31562
3601	4411.05126	17.92362	7001.06185	580.66717	3.39375	0.03517	590.00743	0.46706
3602	4417.38072	17.82875	7200.94629	448.74132	-0.08667	0.03248	515.09428	0.32275
3603	4762.36988	14.80788	10472.94086	375.01990	4.00680	0.02397	549.49797	0.33951
3604	4449.54800	19.78554	8012.43444	422.34401	5.88934	0.07971	484.54768	0.59293
3605	4875.73367	7.72670	9707.52625	476.27877	0.11401	0.01043	656.12087	0.22871
3606	4567.90779	22.52765	12958.04540	473.62538	5.42176	0.02713	564.67524	0.44083
3607	4489.26697	20.48316	16554.74330	760.99010	2.56892	0.01257	900.07395	0.26897
3608	4691.20892	13.51594	9681.09161	368.91585	2.39403	0.01960	437.90375	0.23749
3609	4758.71252	18.18259	10723.83301	468.56962	0.36931	0.03362	605.62786	0.41055
3610	5010.22596	10.11809	8320.44430	261.96371	3.06733	0.00645	377.07356	0.13356
3611	3628.35892	23.25322	5169.08603	604.37482	7.25079	0.07227	590.49071	0.47378
3612	4422.46078	16.98276	10267.42802	316.16020	4.37894	0.07072	398.10165	0.60272
3613	4790.80997	15.74781	7072.15538	475.87728	4.06961	0.01539	692.93622	0.21331
3614	3390.28543	17.98149	19463.13197	400.68819	1.05922	0.08247	303.52580	0.72051
3615	4921.06559	19.94863	11487.45832	518.87836	3.17092	0.05622	706.87892	0.39975

3616	4453.71464	21.74686	7636.16717	502.84573	3.16579	0.03036	661.28165	0.30901
3617	4945.65002	13.15438	9385.80195	401.01676	1.52456	0.00963	605.37786	0.17743
3618	4969.64429	17.25401	7945.30251	583.98210	0.95100	0.01802	770.62196	0.31198
3619	4971.54491	10.99763	10239.68491	85.71584	0.04154	0.00280	71.16706	0.33488
3620	4884.21928	19.79860	11073.39132	484.35793	5.88901	0.07613	670.99001	0.35976
3621	4742.71031	21.83208	10210.77280	364.35900	4.48624	0.05965	438.95070	0.43116
3622	4928.89972	7.61293	9203.26230	250.87029	-2.89286	0.00034	362.44459	0.02696
3623	4472.78782	21.00434	9275.05973	557.78692	3.22121	0.04754	721.10254	0.30545
3624	4351.61077	23.78554	10454.19410	932.00694	4.15597	0.03712	995.53561	0.54482
3625	4669.97223	16.61911	18060.36391	392.81007	4.20609	0.09188	537.25658	0.45260
3626	4572.64685	10.31097	9281.85657	509.92634	0.48011	0.03773	635.70404	0.30514
3627	4680.62463	21.50368	9187.31819	461.40268	2.37508	0.05862	556.28919	0.53249
3628	4713.22276	15.86359	11381.89419	565.73335	3.00033	0.05554	749.24384	0.38703
3629	4182.09026	13.32836	10231.05618	76.71977	-2.12665	0.00347	60.02503	1.11299
3630	3396.12266	11.75774	7566.75190	443.32566	1.92201	0.08527	329.71344	0.70209
3631	4704.86090	11.10250	15917.75618	129.46077	3.65658	0.00593	158.40509	0.18911
3632	4575.05786	10.40254	9307.55360	488.76741	-1.38953	0.02490	649.22749	0.20972
3633	4699.06383	18.29267	16559.53023	379.01320	4.57037	0.03372	500.81068	0.12687
3634	4240.25327	17.40098	7588.46903	595.86115	0.62901	0.02256	625.42256	0.48595
3635	4056.52431	9.20738	11869.62410	168.54468	-0.84002	0.00584	199.26406	0.11533
3636	4762.39467	21.64301	19623.30069	638.77389	4.33825	0.03569	816.57877	0.34799
3637	4846.54448	13.59034	12180.32366	449.69404	1.61650	0.03470	568.72982	0.45870
3638	3106.61008	18.13069	10207.59361	413.47804	4.11759	0.17517	360.16623	0.79499
3639	4521.99713	19.91017	7359.53628	467.48323	2.24151	0.04880	556.75295	0.44600
3640	4897.06381	9.54826	10179.04828	553.08255	-1.51825	0.02114	722.36202	0.32481
3641	3260.91125	18.31556	18415.93305	402.60496	2.84915	0.17648	302.62421	1.09687
3642	4899.25221	13.48730	8174.62755	497.83017	1.62181	0.01618	716.01412	0.22966
3643	3669.46920	14.07611	9922.04213	514.33116	2.58175	0.08215	499.92060	0.75053
3644	4456.67290	20.29733	10189.42695	702.79897	5.24232	0.02189	870.82094	0.27703
3645	3514.84869	9.33962	8217.84186	355.21486	-0.51713	0.02794	264.38541	0.53763
3646	4976.56612	23.09388	10175.38860	604.37406	2.04120	0.04498	711.20807	0.79190
3647	2450.63142	13.83402	3945.27248	430.13552	5.74067	0.27731	511.23483	0.76914
3648	3693.75856	14.15975	10421.03418	434.36201	-0.04046	0.05255	409.20951	0.68394
3649	3177.52470	15.84147	12231.64673	402.17658	4.09028	0.12088	299.00765	0.62114
3650	4636.65296	15.38833	10179.46747	392.23165	3.90138	0.08678	543.98404	0.44264
3651	4423.39239	11.43106	8405.09953	547.81830	-3.00418	0.01113	677.53875	0.28759
3652	4578.91001	17.95436	8263.95664	471.31077	2.61423	0.02682	621.34372	0.31173
3653	3776.32220	12.11222	9410.16249	654.09316	-0.39496	0.03030	659.20986	0.49694
3654	4223.04089	17.47628	18224.05421	70.26291	1.04272	0.01412	30.03163	1.05026
3655	3293.43102	17.27024	7429.74373	348.11055	0.86792	0.08669	249.56417	0.78573
3656	4491.42826	22.59538	7416.00931	523.53455	5.59191	0.13223	596.23783	0.75413
3657	4638.13565	15.39689	10184.16412	409.08130	4.60026	0.09966	574.09433	0.44463
3658	4415.93450	22.70628	8379.67421	659.85101	2.72930	0.01425	849.76494	0.30127
3659	4198.76464	21.01577	10517.15538	815.23372	2.56145	0.04107	812.06663	0.53893
3660	4784.78494	15.47060	7030.62496	319.36789	2.05227	0.01386	458.60202	0.21940
3661	2997.59291	24.79902	7263.71593	504.58802	5.35934	0.15492	289.43941	1.02684
3662	4038.34046	22.40314	8371.08314	66.17657	2.77245	0.00510	33.57735	1.88506
3663	4087.36399	18.95367	6730.84474	659.93625	2.76354	0.06472	678.05879	0.59736
3664	4413.91672	17.84645	7166.06323	590.90977	1.92703	0.04587	697.80590	0.41581
3665	5003.03032	7.78253	13757.69315	136.50727	-0.47422	0.00204	184.79391	0.08354
3666	4901.89724	12.70195	7597.42344	423.74672	2.39138	0.03739	575.74992	0.30106
3667	3540.47516	9.40739	7236.72181	698.28819	2.54625	0.04197	668.76409	0.60839
3668	3262.05855	18.17248	9804.99602	406.78019	2.29759	0.12676	323.75616	0.88556
3669	4942.39795	13.07994	9403.18377	348.79960	3.66568	0.01077	525.51653	0.13868
3670	3533.81650	17.34267	7950.20759	375.28684	0.20880	0.05873	356.00808	0.57961
3671	4881.01252	19.77016	11060.50980	482.84526	3.40365	0.07452	653.23235	0.36193
3672	3505.99569	9.33616	8054.56192	467.47282	0.59727	0.03609	424.20378	0.44988
3673	4920.23452	13.82034	8016.21319	483.63177	5.16849	0.01868	708.53176	0.18482
3674	4374.10482	20.47426	9916.89626	580.42166	1.93919	0.04172	668.27074	0.46052
3675	4878.84049	7.75555	10064.58300	387.74411	-1.58270	0.00863	514.91401	0.23540
3676	3287.25502	18.71032	18791.57697	414.31058	2.55446	0.20762	328.21924	0.96322
3677	4319.32395	21.86739	8587.26036	644.27262	2.24170	0.03516	700.42604	0.56249
3678	4750.31861	21.54713	20057.25308	688.07434	4.78160	0.03502	866.63525	0.37465
3679	3137.04763	16.79767	9538.70451	559.85458	2.92250	0.18421	502.22263	0.66340
3680	4433.44638	15.58187	6458.61476	504.97790	2.68913	0.02334	555.41624	0.41181
3681	3897.83052	11.22891	14384.51555	201.24680	-2.37936	0.00271	248.20585	0.53237
3682	3723.51877	24.45770	7545.47554	67.58252	4.72219	0.00653	24.20249	1.74187
3683	4576.05006	10.21222	9304.15623	418.05267	-2.95915	0.01935	517.83498	0.30780
3684	4513.68833	20.92297	11700.96094	719.15986	3.85573	0.01397	861.19043	0.22621
3685	4056.25198	25.70664	8935.68672	848.45399	2.45167	0.01283	860.60163	0.38933
3686	4425.78778	17.32394	10724.35405	744.46650	2.90843	0.03733	801.76447	0.36743

3687	5008.90036	10.09134	9263.84956	314.03600	1.08000	0.00477	468.74760	0.15511
3688	4974.17254	8.61499	8961.73115	237.47631	1.89145	0.00426	335.95774	0.09708
3689	4576.12619	10.22078	9305.25955	398.92615	-3.76862	0.01975	506.06559	0.36631
3690	3393.31790	21.63935	4518.15632	59.25327	4.16435	0.00441	11.31229	1.08015
3691	2953.79364	26.35346	12585.10455	462.59864	5.75972	0.11798	202.33150	1.67799
3692	3742.23868	11.74089	7563.62019	800.44647	2.22645	0.02170	742.57112	0.52833
3693	4850.56971	13.64168	11888.67346	570.01095	1.43981	0.03873	732.36920	0.48247
3694	4375.22779	20.35425	9999.68896	365.51837	2.38562	0.03790	364.92345	0.44163
3695	4576.17557	10.22615	9305.75473	377.26078	-3.95185	0.02060	480.25507	0.18885
3696	4740.21553	21.75354	10188.55851	369.14475	4.71920	0.06553	430.15054	0.51018
3697	3847.73618	14.43039	19309.12211	157.85951	-0.50178	0.00295	171.05750	0.51536
3698	3901.88482	24.71768	10039.05331	1142.26080	6.67507	0.01435	1093.23059	0.33809
3699	3270.48496	18.09462	9887.53891	482.82588	1.46889	0.13395	428.93920	0.87236
3700	3374.43386	20.28438	9690.11915	140.82147	3.75199	0.01098	112.74038	1.10177
3701	4604.95458	20.65304	21021.70499	390.04342	5.04597	0.07607	499.66150	0.48587
3702	4438.37845	17.23364	14606.27263	57.43971	1.93266	0.00923	15.34086	1.48441
3703	4292.35707	18.13422	6913.64681	552.27463	1.84659	0.04637	592.55589	0.52690
3704	4975.08495	10.27638	8738.80988	282.63006	1.53474	0.00445	427.72255	0.14697
3705	3931.31481	20.07652	9077.46905	823.11640	6.14955	0.06042	733.77752	0.69951
3706	2601.55646	26.37587	11409.33284	588.08786	7.62856	0.17183	233.05068	1.37228
3707	4046.41658	8.98194	12059.96397	251.29953	-0.93343	0.00362	319.84003	0.20678
3708	4811.33073	22.29401	11772.30487	710.75431	2.04372	0.01717	933.29684	0.27568
3709	3854.83211	24.42313	6280.88057	739.21797	2.64412	0.02291	708.75727	0.81498
3710	4289.14916	17.66127	7518.90107	790.65367	3.22033	0.04820	827.75582	0.42956
3711	4968.13943	9.88011	8840.64445	506.89179	0.49344	0.00757	725.70549	0.16794
3712	5012.32419	9.99639	9469.42360	266.37170	0.65340	0.00468	390.03352	0.17174
3713	4795.63601	10.38892	11106.24851	613.96277	0.55744	0.02683	790.52962	0.42027
3714	4084.50178	18.97941	6710.81531	798.20943	3.73772	0.07598	795.24752	0.61147
3715	4575.43750	22.49663	12938.22742	555.02949	4.70991	0.03288	706.99875	0.34544
3716	4798.24860	22.28779	9899.16575	680.51338	4.03220	0.02211	880.20725	0.27040
3717	4841.41438	15.75218	10205.37971	477.70169	2.55767	0.02972	707.22723	0.25908
3718	4374.33746	20.44779	9929.04412	459.26379	2.74154	0.04158	490.10332	0.47401
3719	3756.33492	12.50289	6501.66246	342.13117	-1.27691	0.01268	342.19803	0.41360
3720	5012.89330	10.00316	9152.90345	261.21544	1.27074	0.00450	381.10938	0.13679
3721	4784.58224	15.48032	6998.93538	346.99393	2.65618	0.01355	502.17345	0.20298
3722	4134.49950	19.97340	15161.05170	80.14680	2.97339	0.01036	38.48603	0.71712
3723	5069.22749	12.93479	12406.90772	97.27956	-2.45804	0.00118	109.46980	0.36671
3724	4306.43156	16.51668	14843.58210	82.30180	0.62519	0.01189	58.02305	1.30405
3725	3159.31831	25.00509	7921.54706	504.08975	4.68440	0.11370	293.36499	1.19751
3726	4131.31246	12.41518	12010.87731	218.67466	-1.38423	0.00519	257.95924	0.33701
3727	4666.92883	10.74649	16388.61183	121.70224	0.89796	0.00927	131.83688	0.49259
3728	4814.76078	22.39637	11613.13903	710.87324	2.64208	0.01519	942.53003	0.24485
3729	4241.58465	19.12470	7220.23590	585.11532	3.99349	0.04897	617.07605	0.50389
3730	4497.51247	21.26603	8788.33965	453.86494	4.12391	0.08591	494.94308	0.62227
3731	4487.06360	21.02659	9239.35810	555.18995	2.31575	0.04505	727.40652	0.37653
3732	3932.33471	20.03227	9533.75006	772.70154	6.01864	0.05385	624.83787	0.65958
3733	4504.56095	16.54722	8920.02183	500.00459	-0.76002	0.02807	587.61990	0.42418
3734	4604.63865	20.65453	22365.73352	379.71734	6.05020	0.09912	482.51094	0.47943
3735	3732.69617	12.88638	13704.76728	153.78444	-1.42155	0.00581	167.35183	0.24129
3736	4372.49137	20.43894	9932.20475	585.59284	3.23438	0.04154	644.06808	0.49391
3737	4887.46910	9.38555	12694.45158	410.40109	2.18890	0.01970	611.90043	0.26317
3738	3231.02594	16.50872	12345.53316	290.63934	2.48327	0.08424	183.81561	0.75655
3739	4944.42409	13.12699	9364.76999	363.45208	3.15819	0.01088	549.33767	0.14700
3740	3086.51417	19.57260	10603.67032	514.22886	3.89494	0.12606	370.43471	1.16243
3741	3216.41711	14.48759	10034.73396	275.61290	2.80086	0.09396	240.68255	0.35492
3742	5112.98668	10.98074	13865.03022	148.53575	1.17825	0.00298	197.69999	0.10968
3743	4945.61177	13.15575	9461.82625	401.11290	2.47868	0.01033	604.36188	0.20326
3744	3932.92899	17.42762	10853.36923	81.38369	-0.56078	0.00424	52.03640	0.98504
3745	4564.65616	22.53830	12928.50917	458.50748	5.33104	0.02781	559.84584	0.40315
3746	4006.90419	9.40760	8933.95304	255.67220	-2.85223	0.00619	287.53825	0.23048
3747	4665.25755	18.77446	12268.42046	594.68335	4.05030	0.04540	736.93271	0.34437
3748	4859.89075	13.81974	11583.17851	484.29867	3.25824	0.04622	596.01284	0.49578
3749	3375.75064	20.31583	10636.39046	185.67758	4.61817	0.01470	205.36651	0.91721
3750	3247.41572	17.14970	7117.41907	337.67833	1.67813	0.10812	243.09099	0.67961
3751	4805.78356	22.30935	11462.62589	622.10254	3.54044	0.01520	805.43112	0.27038
3752	4570.64727	17.92680	8313.74966	508.62689	2.39676	0.02627	675.47383	0.31378
3753	2982.89421	20.65428	8600.63011	508.70925	4.30977	0.21621	377.57103	1.24114
3754	4633.48469	7.63160	16794.87932	99.20382	-3.08447	0.00001	105.25040	0.11584
3755	4342.30023	21.91425	8698.43576	811.97249	2.45668	0.04250	826.27549	0.53598
3756	5113.13154	10.98652	13865.68017	170.56947	1.08274	0.00301	245.18625	0.12353
3757	2904.22898	16.21919	14860.75611	351.24490	4.63422	0.20429	230.02950	0.58866

3758	3574.79021	17.69700	7345.56281	412.26304	0.28116	0.09563	376.02695	0.81095
3759	3371.25975	20.36347	10489.67332	193.18258	4.11484	0.01979	201.25215	0.93612
3760	4968.89581	9.89910	8896.35618	190.99808	0.89023	0.00869	228.53547	0.14037
3761	4663.65611	7.46939	17876.85379	94.97716	-4.40584	0.00002	101.92363	0.13103
3762	4606.58232	22.27815	8315.47136	465.16680	1.16244	0.04100	568.39803	0.42258
3763	3265.64043	18.49899	19012.52774	402.85195	2.26662	0.19701	354.02926	0.87467
3764	3778.25783	24.16876	10930.85068	811.07458	3.94927	0.04780	752.18408	0.77147
3765	4689.14717	13.58336	9913.78045	333.32132	3.03633	0.02270	385.74262	0.22825
3766	4168.53089	11.28423	14962.04526	153.66065	-1.40108	0.00187	182.86341	1.01199
3767	4380.84353	18.87415	8605.40196	584.05494	2.65717	0.03940	614.34443	0.43342
3768	3218.33303	14.50431	10019.53794	369.66499	3.60119	0.07114	348.78575	0.44040
3769	3548.19282	16.81164	17533.86005	418.84716	1.13549	0.14425	398.53140	0.66913
3770	3691.81816	24.87994	13107.31741	92.60666	4.98071	0.00849	40.56927	1.08520
3771	4517.03468	20.92193	15133.18722	755.15713	3.18013	0.01447	946.57250	0.22686
3772	2861.99965	15.33951	15055.90341	433.12164	4.47427	0.23276	360.80378	0.71361
3773	3753.18184	24.47568	11290.65144	70.57172	4.66221	0.00631	26.43335	1.42834
3774	4789.70395	15.73469	7065.98680	461.51759	3.85854	0.01517	675.25354	0.21346
3775	4463.72713	11.99481	16124.16954	92.64477	-2.59864	0.00025	89.76978	1.12349
3776	4819.22967	22.38459	10503.07389	673.93165	3.37812	0.01748	873.92493	0.28691
3777	3829.57266	23.83841	12117.14231	605.66085	6.70090	0.01911	637.97746	0.05564
3778	4888.44259	19.85712	11148.56045	339.54213	3.83670	0.05418	466.60224	0.39089
3779	4688.04049	21.36324	17495.02685	445.57079	5.47758	0.06745	552.96578	0.60079
3780	4943.05324	13.09349	9434.70566	343.96057	1.95548	0.00982	508.68082	0.15640
3781	4239.30592	24.68263	8279.57681	763.34483	1.85524	0.01965	848.44059	0.30433
3782	3766.87528	11.92183	9285.59825	731.64364	1.16384	0.02959	745.18024	0.49863
3783	4958.24326	6.65055	9531.43194	446.44687	-2.73930	0.00677	636.41901	0.17089
3784	3860.03364	23.90294	12064.79829	615.43093	6.62148	0.01535	618.94676	0.06460
3785	4251.38033	18.96939	7141.93746	829.04120	2.80975	0.05379	886.55347	0.39845
3786	4957.78843	6.63492	10234.37254	394.27523	-1.01988	0.00609	579.75845	0.20723
3787	4575.14978	7.67801	8880.87159	262.81817	-2.71707	0.00367	367.94990	0.08549
3788	4847.17138	13.30790	10777.71971	414.80329	2.94685	0.02440	620.98244	0.29889
3789	4710.27663	19.22165	11495.17240	328.63606	4.05621	0.07929	420.90570	0.56792
3790	3576.14698	13.31108	5195.45571	694.98193	1.78319	0.04239	700.37575	0.54910
3791	3633.06599	22.19432	12181.68863	136.00694	3.91436	0.01514	105.25059	0.66889
3792	4574.91274	10.40555	9311.54249	467.94519	-0.77097	0.02446	606.57962	0.21410
3793	3858.89913	11.89934	13329.59107	110.02325	-0.29306	0.00398	83.24231	0.37774
3794	3753.05698	12.37403	6481.36724	377.46837	-1.21596	0.01474	425.46823	0.41565
3795	5019.93138	13.79919	8421.27617	366.70513	1.76238	0.01634	542.80816	0.20315
3796	5260.64948	14.41616	9860.88996	46.70348	-3.38564	0.00012	28.73835	1.04294
3797	3373.90053	20.90291	4647.21992	63.91824	4.43757	0.00574	14.37506	1.07428
3798	4398.14465	6.51459	7821.20102	503.72592	-0.63936	0.00402	671.28900	0.07059
3799	4758.65754	8.26281	9795.27028	254.16929	-4.15710	0.00288	341.98340	0.09550
3800	4266.77137	16.20426	7790.17341	596.96752	1.17808	0.04151	605.68092	0.49575
3801	3756.80758	12.50632	6501.58974	344.16697	-1.67130	0.01466	376.92649	0.41359
3802	4247.23586	19.07731	7239.99908	505.94297	5.06663	0.05571	513.33064	0.40495
3803	3800.27966	23.70170	12057.14284	696.33530	6.56668	0.02044	707.57877	0.05217
3804	5044.93134	13.49106	8941.26970	371.89717	1.83618	0.01353	551.52874	0.19665
3805	4845.46902	12.73101	12982.96180	380.67642	3.36176	0.02497	540.72251	0.26739
3806	4505.99116	21.12638	9942.41249	350.38991	6.00889	0.06993	386.10028	0.53028
3807	3767.07717	9.56255	8328.03524	534.03210	1.57046	0.06668	538.72436	0.55608
3808	4134.27696	12.82959	12534.16647	237.53564	-0.43917	0.00856	302.14381	0.17729
3809	4228.83373	18.89402	6832.18605	795.12927	2.86976	0.05509	820.41915	0.42422
3810	3845.80916	20.21935	6362.50645	592.68022	1.92100	0.02497	559.59659	0.50654
3811	4031.24336	25.78707	8776.18376	918.46859	3.75741	0.01711	897.38969	0.35476
3812	2898.61878	19.92343	7730.44405	531.75248	4.72742	0.27304	385.94769	1.09034
3813	3687.06280	21.83362	12220.01302	129.96547	3.56572	0.01691	92.18730	0.72952
3814	3560.71151	22.68616	12661.88430	154.71338	2.92035	0.01740	113.01524	0.85307
3815	4735.61450	21.67669	10128.77709	309.73966	4.29302	0.07379	348.87498	0.46284
3816	4564.21388	20.63486	17675.51287	485.11037	3.91215	0.08046	636.35231	0.42676
3817	4975.53261	10.29188	9095.97745	260.87046	1.20872	0.00443	390.13665	0.17301
3818	3768.29585	25.06459	7702.69989	49.16843	3.85167	0.00499	8.90545	1.50416
3819	4146.52543	16.45141	8955.08629	710.53124	0.33100	0.02185	781.19286	0.37936
3820	3132.19649	15.60783	6654.86188	302.27992	1.33203	0.01118	242.34908	0.24511
3821	3576.81877	13.38098	5208.62682	585.53965	2.08191	0.04274	527.46425	0.58194
3822	3877.43506	23.97425	12253.64725	475.54786	7.16046	0.01656	419.55757	0.06511
3823	4281.85247	14.23553	6826.07186	650.69363	-1.41713	0.02400	747.68602	0.44157
3824	4969.75986	17.26377	8776.45690	624.98728	1.62733	0.01772	817.12336	0.29478
3825	2484.31204	14.47743	3639.97021	434.78997	5.02872	0.32702	484.64382	0.74446
3826	4417.43953	22.68203	8623.75802	671.90955	3.56990	0.01462	884.61966	0.26092
3827	3921.58429	18.58373	6918.32327	542.31351	6.04903	0.05665	440.89105	0.64644
3828	4616.03537	7.68708	17496.78611	115.97123	-4.44835	0.00007	145.97998	0.09725

3829	4688.32653	15.32329	14184.23290	430.47056	4.80777	0.06728	605.34072	0.28338
3830	4412.20896	22.69507	8314.35827	655.08874	3.86684	0.01603	844.25216	0.30416
3831	4435.48842	12.57014	14631.65699	90.75653	-0.38086	0.00067	85.11057	1.13048
3832	4504.54640	16.55706	8545.16943	577.97305	-0.30029	0.02845	685.15850	0.30403
3833	4929.29914	19.86665	11117.05096	254.04559	2.41649	0.05045	318.51352	0.42946
3834	4080.01566	21.82459	8924.17531	836.62570	2.85877	0.03034	844.72369	0.52213
3835	4173.75693	18.99121	8215.45905	713.09289	1.86314	0.03785	731.24375	0.45471
3836	3736.38537	11.54443	8783.97124	589.61947	0.50482	0.03257	583.30887	0.60369
3837	4797.53022	16.83421	9914.59760	577.63585	1.35632	0.03649	747.18924	0.38130
3838	3944.44209	20.04369	9136.01948	720.08328	6.26636	0.05348	603.53599	0.67980
3839	4221.35353	24.73470	8238.30151	672.23999	2.87010	0.02542	747.28472	0.40133
3840	4704.30075	19.16895	9933.03020	687.45136	1.07602	0.04195	869.63373	0.27075
3841	4339.39057	17.15097	8215.13822	586.76203	2.87703	0.03914	625.91704	0.37352
3842	3831.06697	25.47950	6664.17465	68.55819	3.94243	0.00647	22.65614	1.50517
3843	2871.30617	16.51489	14001.48523	438.02845	3.54537	0.22790	352.94564	0.62349
3844	3973.88193	22.94010	7890.91572	823.10961	2.41374	0.03764	850.75204	0.50603
3845	3496.62346	23.97339	11584.80582	1014.54945	10.78286	0.15868	694.17356	1.82332
3846	4430.80905	14.64172	6180.77388	630.99359	3.34576	0.02784	737.79050	0.33695
3847	3505.61695	15.32079	11574.19797	420.36478	2.30161	0.08496	326.71361	0.50050
3848	4957.61872	6.63161	10232.60148	302.21724	-1.92443	0.00642	429.70101	0.20534
3849	2486.12932	14.59367	3751.05641	407.54877	5.95649	0.34606	473.38912	1.09123
3850	4038.70929	20.61151	15268.22702	77.01365	1.12601	0.01506	35.63504	0.91974
3851	4526.92071	20.09849	21573.68677	535.64567	5.28885	0.11984	701.90851	0.43628
3852	4642.94705	20.11321	8006.36021	369.71222	3.25813	0.04485	507.95539	0.33435
3853	4250.94861	18.97638	7146.35110	791.93520	2.31136	0.04013	845.89397	0.40084
3854	4705.36340	19.21559	9868.36574	557.52691	1.80402	0.04722	710.57547	0.31033
3855	2950.68260	16.85706	15156.71290	437.15218	3.57561	0.23857	396.44734	0.71497
3856	4706.52783	11.08433	15910.94511	159.13584	2.85592	0.00520	214.09225	0.23196
3857	3837.14288	23.89819	7131.95807	672.76917	6.87930	0.06422	716.57529	0.42600
3858	4239.53903	17.41861	7576.42598	746.29893	1.35001	0.02902	802.97937	0.47715
3859	4820.97696	22.35540	10501.32598	643.02874	3.15647	0.01973	842.50732	0.27957
3860	4340.25151	19.41377	6386.56326	622.56433	1.73939	0.04716	693.15374	0.50521
3861	3771.65765	9.64501	8360.67559	508.30300	0.55527	0.05668	498.43546	0.52323
3862	4374.43925	20.37408	9975.51000	455.72873	1.10880	0.03981	496.78474	0.43194
3863	3672.65124	14.13261	9990.23040	494.21113	0.89612	0.06536	492.38668	0.68642
3864	4267.09175	16.23376	7795.89179	627.29030	0.70447	0.04124	697.44873	0.50959
3865	4529.61069	20.08919	21833.71248	426.74559	6.70215	0.11627	552.71981	0.26691
3866	2805.98585	14.62408	13939.53869	421.75227	4.62728	0.23977	384.26972	0.70113
3867	4704.28147	19.15179	9948.64741	651.37411	0.45562	0.04079	831.82618	0.31632
3868	4605.96703	22.30032	8626.34552	661.49593	3.00316	0.04313	809.01999	0.41839
3869	3605.32422	17.18922	17485.77120	449.99428	-0.29757	0.10951	420.18426	0.96618
3870	4492.28503	20.50243	16571.97056	549.77322	2.22861	0.01269	671.03436	0.27443
3871	4546.44481	15.99710	11240.09996	424.32846	4.39915	0.07671	603.85013	0.38816
3872	4461.74332	21.00382	9404.87983	638.86652	2.45425	0.04368	821.04488	0.37826
3873	4319.81650	18.30986	7705.81332	482.75786	5.51436	0.11208	577.45793	0.41585
3874	5009.31027	10.09979	9279.55266	237.63352	1.82173	0.00536	344.95358	0.14841
3875	4931.66701	7.62231	9212.76561	276.06015	-2.03688	0.00028	414.91388	0.02746
3876	4234.14872	18.86715	6832.02076	699.12703	3.15716	0.04220	733.85573	0.54691
3877	4240.12813	17.41317	7586.38783	637.67618	0.98766	0.02367	710.43911	0.48224
3878	4776.32369	10.26949	11808.87861	539.04698	-0.13706	0.01378	710.68047	0.20131
3879	3397.23385	11.74042	7609.37037	538.48914	2.14974	0.08250	429.88009	0.58502
3880	4451.21904	19.81584	8023.59539	352.67465	5.63833	0.07693	382.60903	0.59704
3881	2560.43816	15.40161	11682.03955	335.96549	5.09418	0.37570	370.98960	0.49876
3882	4911.78823	12.72583	7712.40732	374.68462	3.45645	0.03746	504.95160	0.33277
3883	4372.30695	20.46583	9901.08491	584.33179	2.82255	0.04216	672.19759	0.44419
3884	4646.20404	22.36216	9653.66800	688.69448	1.79535	0.03615	887.63147	0.49801
3885	4958.03524	6.64238	9524.13235	452.04618	-1.59626	0.00667	662.03501	0.19746
3886	4887.06528	9.35098	12687.67141	354.89816	1.84491	0.01829	529.85438	0.24084
3887	3843.70264	20.23071	6345.80201	700.63841	1.86303	0.02412	745.87915	0.48336
3888	4917.87390	10.73597	8904.60579	209.40770	2.00299	0.00552	303.28431	0.13568
3889	3366.82003	20.20092	9782.51272	124.40408	2.75027	0.01108	86.90959	1.10778
3890	4701.84053	11.07140	15880.89621	142.17450	3.48804	0.00501	178.70407	0.19616
3891	4604.18938	18.85393	8409.12067	403.86580	4.63063	0.03292	525.73374	0.29269
3892	4139.07195	12.91783	12559.21457	227.04264	-0.25462	0.00819	296.86666	0.16450
3893	4619.51166	15.30581	18062.08450	48.15235	-0.30504	0.00602	9.57454	1.11709
3894	4640.76082	7.46006	17011.10182	91.74169	-2.06771	0.00001	100.01287	0.12002
3895	4539.24874	20.92031	15706.39733	682.34686	3.06176	0.01168	803.79811	0.24340
3896	4335.05474	18.27181	6882.07503	552.16763	3.26046	0.03255	602.45721	0.49711
3897	4790.83032	16.70892	9863.24134	612.05377	0.78574	0.04486	789.07590	0.33014
3898	4255.22016	18.99582	7161.59872	817.30035	3.41816	0.05398	918.27027	0.40059
3899	5022.61585	18.23788	10076.50708	321.49831	2.81924	0.01805	452.66264	0.25359

3900	3833.10475	20.20411	6288.55595	847.45584	2.86720	0.02928	841.49978	0.44737
3901	3839.40639	23.94473	7125.92126	668.39020	7.94328	0.07338	659.35221	0.35644
3902	3213.77288	19.36696	13065.87601	343.13007	2.86767	0.17128	244.24969	0.72807
3903	4490.27066	21.08352	9242.67416	573.40257	2.74235	0.04287	740.96092	0.38217
3904	4798.18733	16.83824	9918.54133	558.82339	1.54531	0.03501	716.27966	0.37564
3905	3755.75940	12.28647	6509.97525	286.25208	-2.24726	0.01514	274.36034	0.38867
3906	4878.70821	7.75205	10014.32890	413.18409	0.00015	0.00790	549.57767	0.23824
3907	4547.92285	16.03151	11262.82227	318.49343	4.96945	0.07774	447.38314	0.38832
3908	2565.68818	16.33302	11366.33233	412.90748	5.41499	0.36357	449.77203	0.52802
3909	3697.14895	24.56160	6229.39707	585.70164	2.87460	0.04182	526.39242	0.45516
3910	3378.81406	9.60508	6916.07085	364.21530	2.56635	0.06635	327.87911	0.51553
3911	3397.04212	11.70069	7617.18057	593.34459	2.10856	0.08035	497.35586	0.62312
3912	3476.68607	13.91221	7317.47422	468.91922	2.02334	0.06188	399.79127	0.59656
3913	3394.70066	11.75186	7577.49010	693.52030	2.64200	0.09171	605.72267	0.76262
3914	3990.67766	22.93396	7947.69438	673.23124	2.57943	0.03285	670.20602	0.54510
3915	4514.04218	19.82785	7358.36735	721.71529	1.92012	0.04895	868.25931	0.43957
3916	3755.51740	12.30478	6495.02718	326.92221	-1.42595	0.01499	340.00096	0.37891
3917	4885.66257	9.31717	12567.15260	376.76494	1.17149	0.01610	558.52955	0.26109
3918	4062.13434	14.36662	10829.72695	67.11043	-1.74930	0.00542	40.48455	0.82333
3919	4784.33507	15.47568	7009.52155	346.26074	2.56088	0.01348	501.48592	0.22758
3920	3396.91472	11.78931	7596.38098	613.01809	3.05948	0.09137	519.97155	0.79252
3921	4979.75026	17.68422	8742.35420	699.06521	1.34063	0.02475	909.47595	0.29694
3922	4173.76369	18.97216	8215.05770	855.89866	2.22923	0.03410	902.35555	0.46226
3923	3186.70424	16.55988	7073.99397	343.71225	2.43054	0.12117	221.16136	0.71985
3924	4672.91526	20.19006	8216.95883	379.41837	4.22522	0.04655	525.93470	0.30257
3925	3753.83060	12.26770	6493.34343	266.99006	-2.31226	0.01660	247.43735	0.39229
3926	4420.35081	22.71252	8506.37277	611.49650	3.35050	0.01359	806.70940	0.23380
3927	3418.07841	20.41920	6135.62402	71.09929	4.19423	0.03064	18.94822	1.33395
3928	4573.92342	7.64494	8695.43261	337.34839	-1.91996	0.00419	485.82432	0.08023
3929	4844.91099	12.72989	15159.21714	462.72125	2.60840	0.02524	657.51784	0.32581
3930	3181.47714	15.81670	9641.17525	592.72195	4.00853	0.20901	512.99871	0.71644
3931	3132.93978	15.60920	6681.75108	369.03688	2.34585	0.01568	358.05900	0.24988
3932	4512.45787	19.84560	7324.22002	494.10661	2.35236	0.05255	594.13579	0.44186
3933	4177.13830	18.98146	8254.10260	637.19138	1.23701	0.03403	688.69916	0.54857
3934	4504.52442	16.54174	8919.31114	581.70700	-0.84093	0.02753	692.56079	0.43057
3935	4768.33095	8.14218	9427.23357	294.73904	-0.64067	0.00342	416.26342	0.10275
3936	3745.37481	12.91924	13567.86140	150.63488	-1.26452	0.00387	156.88527	0.27745
3937	4904.35388	13.51972	8057.57360	445.42229	2.27799	0.01829	650.96953	0.21549
3938	4900.68417	12.90041	7410.20719	346.53843	4.35900	0.03989	452.44170	0.28926
3939	4355.89087	23.79467	10478.97271	907.82520	4.82250	0.03881	942.98842	0.55963
3940	4837.63435	14.50398	11308.80947	375.24162	2.75188	0.03001	560.22691	0.23901
3941	4633.03410	20.67601	9207.29760	576.69373	3.53607	0.07614	726.13463	0.49276
3942	3996.68513	22.91851	7965.19114	629.42352	2.39495	0.03005	654.52183	0.55310
3943	2912.56725	16.57472	15021.65528	290.12350	4.27237	0.20094	212.60106	0.68473
3944	4095.25659	18.23648	14734.05213	75.64043	1.57213	0.01201	42.56518	1.18606
3945	3412.81327	20.07742	7159.41317	77.00557	4.09695	0.00625	27.56607	1.42116
3946	3988.11671	22.96309	7949.91888	765.46563	1.88761	0.03398	802.97207	0.49773
3947	3224.39016	24.96652	7577.49490	411.84951	4.21950	0.12172	179.03968	1.30931
3948	4895.30079	12.79147	7482.30651	385.73682	4.04381	0.03574	534.53447	0.31871
3949	4525.91563	19.96367	7359.71919	638.81270	1.01463	0.05094	782.40901	0.42373
3950	4265.10398	10.73793	14743.64438	117.75213	-2.10343	0.00121	121.55650	0.98570
3951	3529.10285	16.67144	17003.88581	461.12338	0.58225	0.13850	403.23610	0.76580
3952	2853.33344	15.21350	14842.86113	346.57913	4.18870	0.23637	241.17416	0.74729
3953	4377.85604	18.82881	8568.25248	581.60019	1.72482	0.04048	650.97031	0.42724
3954	4670.44295	16.61063	18065.07411	433.12117	3.57873	0.09091	599.73878	0.48497
3955	4571.51831	14.12648	21540.63149	58.90769	-2.14048	0.00001	22.55099	0.42020
3956	3190.72223	16.69606	7059.97781	347.62673	1.89885	0.09826	290.65348	0.64216
3957	4975.53343	10.29294	8742.02741	236.37717	1.88402	0.00446	353.31190	0.17624
3958	2891.04849	15.71834	15621.22875	436.22343	4.05379	0.22438	421.24198	0.83158
3959	4400.52324	6.53019	7960.78575	305.69487	-3.51859	0.00281	397.20659	0.15807
3960	4415.93450	22.70628	8379.67421	659.85101	2.72930	0.01425	849.76494	0.30127
3961	3914.57603	12.93395	12073.88625	337.78962	-0.02032	0.03347	382.61118	0.31284
3962	4790.76614	10.25147	11224.91006	384.46508	0.09640	0.02535	476.73850	0.39717
3963	4332.49698	18.33169	6860.60361	559.41737	4.31339	0.03228	572.46528	0.50733
3964	4458.22181	19.57502	5695.13864	528.35699	3.05137	0.03925	634.73436	0.41769
3965	4423.64494	11.43125	8383.62092	537.34836	-2.13880	0.01095	662.06742	0.28668
3966	4232.48551	18.86374	6826.68411	621.77716	2.70337	0.04440	677.90312	0.56085
3967	4688.01773	18.32896	16737.56468	336.60076	4.02382	0.02972	443.03975	0.16964
3968	5014.35328	10.02730	9392.39730	239.84694	-0.15220	0.00498	347.10383	0.18056
3969	3220.30094	14.51152	10061.17467	394.06428	3.19153	0.08334	422.43678	0.43728
3970	2491.61284	14.52516	3949.63885	409.02683	6.00936	0.33238	418.63559	0.24438

3971	4713.01969	15.82866	11104.63538	451.55317	4.86890	0.05735	582.19785	0.29507
3972	4291.95950	18.14393	6920.16284	663.48028	2.27280	0.04878	713.41615	0.52453
3973	3536.12344	16.74700	17269.31873	409.17483	0.84638	0.14681	366.21081	0.77954
3974	4768.74580	8.12743	9562.37870	382.20979	-2.12380	0.00325	561.16601	0.07782
3975	2980.90238	16.93535	15677.48781	323.41135	2.87695	0.14147	285.92036	0.85193
3976	4280.70783	14.23359	6796.84380	466.32398	-2.49050	0.02215	538.38863	0.35422
3977	3699.61676	25.42111	10508.80593	57.83790	2.67049	0.01283	15.77657	1.19404
3978	5023.38238	13.88871	8349.62551	346.80128	3.64178	0.01831	508.02244	0.15683
3979	4264.70967	23.20742	11933.57461	838.58563	5.11366	0.00985	963.33569	0.12359
3980	4708.04755	15.76161	11395.93091	487.38290	3.98971	0.04910	640.27277	0.38794
3981	3110.88990	19.69232	10610.32382	428.94572	3.72886	0.13439	248.15055	1.15817
3982	4927.17850	7.61073	9096.11256	308.96443	-2.11412	0.00056	462.66205	0.03088
3983	4654.47574	19.49236	12273.78454	246.42785	4.79208	0.10457	281.88158	0.42717
3984	4004.64336	9.97052	9308.90347	381.64969	-0.47254	0.01166	473.37458	0.16369
3985	4969.64654	17.24850	7947.60208	498.34053	0.61790	0.01772	662.30502	0.30184
3986	4835.42522	15.68533	8437.98354	269.30580	3.07380	0.03102	382.33798	0.20887
3987	4705.94438	11.05956	15919.66446	109.39325	1.72531	0.00418	113.51155	0.20178
3988	4338.59501	19.42219	6379.64117	625.75156	2.57883	0.04664	660.77873	0.52936
3989	4894.97192	9.76786	8027.86144	131.26422	1.14817	0.00484	155.67159	0.24236
3990	4201.76116	23.77030	8496.39244	650.79630	2.41238	0.04941	683.56745	0.60776
3991	4580.47541	18.01815	8176.92956	502.40846	1.76496	0.02656	666.30102	0.29526
3992	4637.04631	16.97347	10099.45030	333.68256	4.51023	0.06064	455.72005	0.52787
3993	3504.95030	15.33033	11541.40853	558.97247	2.36595	0.10923	514.85866	0.52234
3994	4261.28184	18.99902	7182.65555	917.60820	4.14994	0.05588	967.01815	0.42196
3995	2455.38884	13.54142	3903.96665	385.85045	6.41716	0.27070	397.97913	0.43099
3996	4755.63129	14.71469	11408.71044	353.89834	2.90813	0.02264	507.95201	0.33754
3997	4958.60445	6.66303	9989.51302	400.15350	-0.16098	0.00809	574.04501	0.18509
3998	3505.31107	9.34944	8008.66975	400.32034	0.57758	0.03097	307.70753	0.48131
3999	4436.60883	20.32169	8198.82360	601.16315	5.20706	0.11580	694.13547	0.54974
4000	4816.27833	22.33754	11762.18834	462.33089	3.92172	0.01681	607.25743	0.28674
4001	4368.40577	18.85566	9572.82988	567.01932	3.17325	0.05422	639.80481	0.33463
4002	4493.18898	12.55177	9302.06611	618.98280	1.21718	0.02965	721.72741	0.24971
4003	4218.54128	24.74811	8234.64479	796.56489	1.70104	0.02804	847.55795	0.40339
4004	4254.44459	18.99415	7168.11471	918.86898	3.38198	0.05497	959.99644	0.39052
4005	4943.40508	13.10300	9436.49681	424.80362	2.10322	0.01021	637.15365	0.16775
4006	4896.95803	12.83285	7301.42063	458.86575	2.66512	0.04046	627.33431	0.31638
4007	3506.97165	15.36739	11605.98070	396.68845	2.07953	0.09133	311.91438	0.44990
4008	4504.41743	16.67259	8882.56508	530.93196	0.53792	0.03799	648.67672	0.43021
4009	3381.16155	9.71825	6876.99749	305.50470	1.84878	0.05787	280.58421	0.41460
4010	4707.60798	15.76844	11404.24139	505.33599	4.93186	0.05092	665.48077	0.38679
4011	3680.95398	7.69921	5924.76946	378.93036	-0.53547	0.01974	344.82493	0.52890
4012	4516.41020	21.22505	10056.56526	371.96038	6.18037	0.08569	412.03456	0.52800
4013	4948.48529	6.81067	16907.83661	152.19791	-2.35493	0.00197	203.83795	0.18398
4014	2792.27718	14.55355	13674.41736	454.40377	4.97914	0.24956	451.66876	0.78191
4015	4894.56995	12.78174	7481.72112	446.61143	2.32368	0.04077	615.39246	0.30706
4016	4460.09609	20.43438	16348.33229	574.35689	3.56292	0.01636	732.47742	0.28705
4017	3517.26439	9.37919	8271.32661	430.49989	0.36982	0.03238	366.43265	0.46060
4018	4610.72547	22.33262	8660.28566	675.26531	2.60111	0.05004	808.33389	0.45817
4019	4492.15408	20.51563	16029.88365	635.82337	2.76203	0.01240	767.28182	0.27804
4020	3615.22066	13.37201	20289.25319	278.03060	1.99399	0.02331	310.95245	0.25143
4021	5075.63436	13.21886	9858.37952	113.95282	1.16176	0.00137	137.66583	0.31022
4022	3372.09900	20.38110	10527.58686	196.04434	4.34223	0.01942	217.62565	0.92591
4023	3651.61877	25.47690	9643.10770	123.22984	4.90022	0.01090	80.99178	1.01633
4024	3776.67997	9.56088	8266.52542	371.75022	-0.74581	0.04496	317.77814	0.66929
4025	5092.77519	13.35066	10132.94256	68.09564	-1.60252	0.00095	51.18185	0.38256
4026	4054.66579	13.20187	15139.21184	119.04920	-1.41672	0.00396	105.39449	0.64953
4027	4835.30677	15.67466	8434.08022	391.23083	3.04790	0.02862	575.63722	0.21489
4028	2894.11497	16.57163	14426.01780	338.51517	4.35219	0.23431	222.77306	0.70469
4029	4818.33171	22.33543	10036.38980	644.31836	2.83856	0.02103	849.70629	0.24200
4030	3542.32906	17.33772	8071.95230	310.62229	-0.70805	0.04009	263.09461	0.61790
4031	4724.33432	21.58222	10066.48990	498.33870	4.08446	0.06450	624.39959	0.45237
4032	4491.53671	21.07917	9225.70391	565.52596	2.39503	0.04154	729.58040	0.36476
4033	4793.62326	10.34806	11108.41445	530.32783	0.62487	0.03390	682.85310	0.42063
4034	4808.25666	22.29373	10462.43919	584.89216	2.99000	0.01641	765.49378	0.27126
4035	4709.29042	15.78691	11083.33405	338.52857	4.62424	0.05804	422.98122	0.31225
4036	3583.08130	13.22343	5363.98538	619.69267	0.16976	0.04298	591.18945	0.57082
4037	4617.42908	7.82738	16355.08995	124.12960	-2.04105	0.00002	158.03123	0.08029
4038	3503.27766	15.34439	11575.38329	493.00433	1.72754	0.09049	478.29446	0.42621
4039	3338.98966	24.26446	11595.39066	527.34754	4.69385	0.06741	428.50033	0.74111
4040	4889.13282	19.86965	11148.22704	381.40852	2.64259	0.06564	522.97669	0.38845
4041	4604.03099	20.64835	21014.49412	459.00312	5.48782	0.08005	594.40504	0.48457

4042	4573.74438	7.63439	8602.84259	351.36805	-1.74715	0.00541	499.33538	0.12451
4043	3211.49862	19.37838	13019.63838	457.27809	2.37133	0.17601	423.45251	0.73105
4044	2950.89098	24.99179	7130.86148	611.22391	6.40590	0.17218	370.40310	0.81053
4045	4246.77120	19.00609	7266.32623	416.13089	2.45939	0.04391	413.60275	0.45104
4046	4417.43405	17.81107	7204.76049	585.12437	0.62431	0.02992	689.58529	0.44405
4047	4797.36110	16.81192	9904.52810	568.48896	0.98644	0.03683	740.40349	0.37194
4048	4877.72058	16.88425	8559.74413	443.78522	5.67002	0.06729	592.14467	0.36216
4049	4922.35515	7.59689	9062.26344	317.01985	-3.90723	0.00060	467.30097	0.03169
4050	4958.12239	6.63989	10863.83318	366.50691	-3.58334	0.00583	517.34696	0.20937
4051	4370.27807	20.40253	9916.49462	625.99413	2.72158	0.04974	695.05883	0.35472
4052	4442.02691	20.45769	8218.89020	397.58844	6.09064	0.09479	424.32587	0.52278
4053	4747.92613	15.99789	20775.02631	366.99051	3.43264	0.05464	496.54385	0.63064
4054	4365.82149	18.88304	9560.25540	579.19484	2.20400	0.04636	680.87703	0.33477
4055	3505.85270	9.30341	7978.98810	382.18517	0.04043	0.03455	337.45261	0.41569
4056	3535.04815	23.35636	9149.02124	905.19502	7.14467	0.07877	704.43275	1.24892
4057	4875.81177	7.72839	9708.77049	525.24427	0.36740	0.01003	736.37056	0.23575
4058	5009.04284	10.09085	9282.85330	249.58124	1.00426	0.00606	352.80423	0.11819
4059	4290.79821	17.70831	7548.74700	660.39668	3.99202	0.05089	647.89744	0.43335
4060	4399.24413	6.55929	7969.12801	338.38432	-2.67262	0.00277	455.79172	0.10104
4061	3613.47672	17.66459	7327.32673	476.92020	0.25815	0.05402	465.26699	0.86251
4062	4244.53895	17.30723	7629.52559	669.05211	-1.35089	0.02213	750.19614	0.51047
4063	4157.05917	15.60769	13986.01707	96.38983	-1.14039	0.00154	83.91600	0.96717
4064	4674.39442	18.89225	12411.13793	386.81800	4.76488	0.03924	468.68641	0.38140
4065	4980.18122	17.65207	8840.95459	665.60304	0.83053	0.01883	886.00910	0.30825
4066	4705.04850	19.16426	9947.23970	608.44076	0.79756	0.04280	779.64032	0.29503
4067	2903.56632	20.04372	7894.54221	480.45378	4.46769	0.27928	329.48055	1.11373
4068	4463.75178	21.78751	7669.47762	632.47546	3.88051	0.03661	800.32907	0.23729
4069	4456.64217	16.24893	15842.14442	53.27044	1.31876	0.00899	16.27028	1.20150
4070	4634.38014	20.68033	9191.79564	622.70111	3.95020	0.07379	764.13641	0.49744
4071	4605.84953	22.19773	10986.37783	545.02851	4.42911	0.06961	657.41968	0.56121
4072	4189.02334	11.84274	11849.92596	176.07230	-1.56060	0.00121	204.69696	0.58644
4073	4921.42466	7.61078	9075.70332	316.12626	-3.03023	0.00049	460.19305	0.03200
4074	4547.57358	20.95814	15718.51874	836.87220	3.84451	0.01205	983.43655	0.24927
4075	3533.11670	15.26156	11896.45584	379.39108	0.52401	0.07184	303.57146	0.55714
4076	4175.74652	18.95621	8234.00311	680.13325	2.03717	0.03288	691.02563	0.56114
4077	4132.47799	12.82919	12607.79831	263.94668	0.15305	0.00940	319.01195	0.19078
4078	3192.50205	16.73073	7078.04151	376.51703	1.51571	0.09117	290.86370	0.67723
4079	2929.88476	20.16481	8127.27423	661.81461	4.45766	0.28366	574.43998	1.05899
4080	3353.39545	7.23182	13298.28006	332.58133	1.70314	0.03382	274.96302	0.48970
4081	4080.14727	21.84301	8924.02677	787.43267	2.54224	0.02883	820.18114	0.49923
4082	3703.41731	7.83271	6095.14416	401.75518	-1.98836	0.02043	420.96986	0.50573
4083	4973.44012	9.85030	9292.89620	331.66447	0.09799	0.00665	460.79222	0.08157
4084	3848.74772	24.38429	6296.95416	845.69912	4.03031	0.01757	812.42126	0.74100
4085	4345.36935	18.80916	7875.50197	529.76456	5.94850	0.11549	648.22885	0.48431
4086	3522.02381	16.69947	17036.20685	488.72921	2.30901	0.16356	457.73996	0.82823
4087	4820.93614	20.94071	7794.74536	411.02071	3.16663	0.04167	486.70514	0.42297
4088	4333.84386	17.20645	8154.50764	588.38369	2.11026	0.04394	643.83707	0.42275
4089	3767.26333	11.91923	9273.05920	695.17104	1.15738	0.02982	678.31943	0.64792
4090	4846.56444	14.67154	10669.26261	383.04074	4.35585	0.03461	575.59983	0.19904
4091	2910.34962	16.54883	14942.99669	384.58200	4.09336	0.19754	359.67817	0.65853
4092	4983.28771	17.71982	8849.67703	581.69827	2.02202	0.01978	768.76336	0.31904
4093	4402.46015	15.35683	24566.93767	78.49790	-1.43518	0.00027	51.15246	0.29869
4094	4339.61164	17.15286	8215.23812	491.64527	1.63095	0.03976	501.54766	0.38195
4095	2909.31684	20.06975	7848.31008	458.44352	4.93437	0.26231	284.59511	1.12037
4096	4758.57412	8.22033	9927.23293	308.37349	-3.96711	0.00293	429.86814	0.07526
4097	4767.69387	8.13683	9561.63834	364.03374	-3.14759	0.00301	518.26086	0.08226
4098	4333.83288	17.10964	8144.63408	562.23330	3.84760	0.05323	575.43625	0.31132
4099	4911.30762	12.72494	7773.42595	401.25988	2.77959	0.03526	544.59229	0.32382
4100	4980.87498	17.69175	8866.39151	585.13489	0.55074	0.02230	793.16302	0.31720
4101	4346.70993	23.78284	10441.60212	893.02019	3.54404	0.03879	928.00326	0.55188
4102	4905.17097	13.50109	8073.18722	530.24805	3.06093	0.01554	768.34048	0.22268
4103	3652.12936	23.86021	10474.05766	991.75065	8.48316	0.05061	821.16185	1.16288
4104	4845.37318	12.69484	16827.88862	405.83490	4.36029	0.02088	578.89751	0.30818
4105	3826.89740	23.81376	12165.60341	711.99483	6.97847	0.01903	716.24517	0.06172
4106	4831.42191	14.36684	11000.27086	425.23406	3.10073	0.03174	641.38626	0.23684
4107	4544.97851	14.46944	22116.94034	66.44637	-2.56578	0.00006	25.57337	0.42929
4108	3293.21579	17.28448	7428.95153	389.84805	0.86244	0.08305	308.50904	0.79733
4109	4766.34834	18.35611	10660.52986	565.41055	2.15786	0.03885	721.09942	0.34337
4110	2812.04846	14.74304	13973.64154	371.25037	4.83428	0.24235	287.06538	0.69856
4111	3475.63098	13.91577	7304.71235	402.25778	1.19027	0.06342	349.74779	0.58694
4112	3533.67461	15.23331	11896.60597	430.96118	0.78849	0.06890	364.65884	0.65543

4113	4416.96642	17.81547	7199.93125	638.28436	0.89752	0.03043	756.82693	0.45747
4114	4333.55657	17.25302	8153.37027	628.97509	3.31969	0.04190	688.43333	0.36048
4115	3195.23039	16.71561	7046.77343	311.85813	1.65655	0.10177	219.82210	0.63748
4116	4672.92455	18.87072	12278.99562	440.51218	5.32314	0.04755	541.91078	0.38524
4117	4680.11506	24.51106	8694.86375	475.98703	5.13594	0.06140	551.25752	0.97376
4118	4918.38436	10.74792	8903.20922	140.28734	1.34167	0.00506	162.39848	0.12052
4119	4451.85290	20.34005	16254.76830	509.34227	4.42992	0.01910	599.58680	0.28133
4120	3829.53257	11.86383	12007.67187	119.28092	-1.60417	0.00322	94.73662	0.89139
4121	4976.15721	10.31249	9103.29261	268.08551	1.34331	0.00430	400.22329	0.16346
4122	4788.10731	16.65917	9850.57642	587.26355	0.10141	0.03807	779.55329	0.36351
4123	3739.58287	21.00293	13075.37306	99.19129	3.94529	0.01507	55.35910	0.93436
4124	3311.98339	20.84333	14310.22865	440.09955	2.30675	0.18419	369.89134	1.09536
4125	4239.69055	17.40167	7585.61416	563.75476	-0.27839	0.02085	637.62845	0.52311
4126	4367.12840	18.79937	9615.29905	555.35622	3.06816	0.04201	632.68613	0.34233
4127	4267.17291	16.18653	7789.49043	794.77793	0.96208	0.04324	834.93523	0.47746
4128	4972.80522	7.24590	15923.59880	181.50616	-1.12693	0.00174	258.75896	0.14470
4129	3386.61643	9.52878	6795.00413	418.17007	0.48929	0.05012	408.16885	0.61054
4130	4399.88470	15.29317	24734.13421	109.82912	-1.86755	0.00036	97.51871	0.33421
4131	4911.07152	13.68930	8922.40881	405.03928	2.45028	0.01613	595.82304	0.22668
4132	3528.36520	16.73470	17021.50540	465.75637	1.82266	0.16673	421.04337	0.71130
4133	4367.00210	18.86447	9567.24123	472.01520	3.11953	0.04654	514.96884	0.40051
4134	4147.15088	16.42969	8956.44490	627.80274	0.79249	0.02151	696.74772	0.38176
4135	3754.75582	12.25110	6496.18535	300.32918	-2.63261	0.01675	298.69088	0.39126
4136	4708.32189	15.77014	11398.16162	410.54735	5.37075	0.05592	534.83393	0.39873
4137	3539.45249	9.35519	7190.77743	711.00883	3.02544	0.04672	648.01219	0.57126
4138	4631.29500	22.27546	9839.54723	572.92317	0.80829	0.03924	727.74364	0.41710
4139	3506.88609	9.30858	8025.34526	412.89680	-0.05977	0.03722	370.95894	0.43882
4140	4558.95434	20.52761	17125.18132	513.07769	4.49990	0.09879	646.77387	0.39441
4141	4079.52766	21.86782	8911.78301	755.25507	2.69858	0.02865	781.20912	0.49077
4142	4825.61952	20.86779	7803.95078	377.93720	4.51669	0.05089	441.87189	0.43160
4143	4246.36181	18.99293	7251.33812	546.61222	2.72169	0.04273	583.86213	0.44307
4144	4691.76537	15.39063	14162.95439	305.88884	4.56671	0.06378	418.29033	0.35016
4145	4416.89481	17.82124	7198.45293	562.06461	1.18807	0.03103	663.62903	0.42344
4146	4338.78648	18.68727	7855.28617	384.76183	7.41850	0.08031	474.66473	0.48411
4147	3135.32851	13.83479	8564.66573	657.26341	4.35855	0.32439	573.75887	0.79734
4148	4642.84030	20.11078	8001.88989	390.86436	3.91449	0.04343	540.40211	0.33236
4149	4604.90914	22.17194	10973.16898	346.78981	3.97719	0.07000	382.61757	0.59905
4150	4972.66397	8.58129	9518.30835	273.70147	-0.40777	0.00318	406.31267	0.11558
4151	4895.47592	12.79760	7288.55777	449.49469	2.57031	0.04084	627.01855	0.30498
4152	4244.57149	24.67016	8302.33962	608.54203	1.92335	0.01797	684.34481	0.40942
4153	4057.17387	25.70897	8923.72115	814.26924	1.77502	0.01345	779.22130	0.43583
4154	4507.80358	21.03121	9973.92094	446.34623	5.14072	0.07728	521.60244	0.53375
4155	4770.16143	14.72890	11060.36321	376.70735	2.23016	0.01953	538.23439	0.38595
4156	2928.04902	25.05679	6943.94107	564.51957	6.32423	0.16947	304.45786	0.90969
4157	4825.48084	22.35379	10079.93097	684.08734	2.83740	0.02038	910.95483	0.26485
4158	4647.75668	22.37924	9669.88460	644.50612	2.58109	0.03534	815.85030	0.51471
4159	3992.48932	16.87246	5689.27100	424.09787	-2.61337	0.02606	486.59524	0.80539
4160	2484.64762	26.35689	10781.94844	484.17258	8.20981	0.19819	208.29388	1.41772
4161	3380.21408	9.66311	6921.25845	450.31942	1.85055	0.05959	480.61469	0.55077
4162	4767.99343	18.37956	10679.36952	595.67476	2.67061	0.03431	746.48163	0.35452
4163	4758.33289	14.74234	11429.99568	496.61122	2.76872	0.02374	720.09749	0.32973
4164	4516.72686	21.22007	10052.21261	468.81766	5.49910	0.08900	560.67200	0.51588
4165	3379.06759	9.60967	6915.36802	524.24359	3.12423	0.06790	559.47780	0.53718
4166	4146.96922	16.37587	8959.66227	617.47746	-1.96536	0.01884	684.26708	0.45003
4167	3672.24954	21.82187	12264.31677	132.89075	2.92431	0.01432	93.36254	0.70480
4168	4472.79737	20.46419	13668.76710	289.78765	6.92709	0.09505	303.91047	0.47904
4169	4442.20741	21.74103	7899.99459	537.30275	3.31421	0.03053	679.81099	0.32035
4170	4574.10660	8.59391	12354.56811	71.88287	-3.73362	0.00054	64.79368	0.96373
4171	3214.05991	19.46503	13043.39662	456.61492	1.75903	0.16684	381.40267	0.70335
4172	5009.17698	10.09347	9275.46209	303.60833	1.97432	0.00489	459.74721	0.14782
4173	4239.87801	17.42597	7571.44914	795.94757	0.62950	0.02566	891.43322	0.44239
4174	4077.88878	21.81626	8895.26467	836.58111	2.52575	0.03776	812.90296	0.52906
4175	3377.68747	24.30831	11012.53530	927.43292	8.23084	0.20611	628.78950	1.98275
4176	4729.26120	21.64525	10094.44039	527.20690	3.71213	0.06880	671.03036	0.45213
4177	4787.14831	15.68473	7023.38920	371.89940	4.87784	0.01559	546.70539	0.19320
4178	4374.64623	18.79359	8553.95878	607.74831	2.60767	0.04499	656.67551	0.40062
4179	4819.61522	20.81540	7769.94529	646.28531	2.00497	0.05339	807.30457	0.43513
4180	4293.69097	15.02808	12163.79954	478.17458	-2.40023	0.01733	569.24547	0.38188
4181	4794.17127	10.34515	11106.00783	554.13773	0.97779	0.02927	698.55974	0.44729
4182	4424.14872	17.00513	10300.82338	267.43140	5.10084	0.06904	318.46234	0.61373
4183	4226.50333	18.89152	6824.35928	741.34674	3.41846	0.05645	758.33550	0.43958

4184	4932.72519	7.08177	16564.39167	132.21030	-1.83687	0.00207	167.42517	0.19031
4185	3533.31840	15.23435	11899.81190	363.55775	0.52833	0.06891	288.64728	0.57557
4186	4875.83855	7.73278	9859.71289	471.39109	1.64783	0.01180	648.57001	0.20484
4187	4783.90988	15.47966	7003.31191	472.30819	1.47611	0.01419	683.87658	0.21919
4188	4423.64494	11.43125	8383.62092	537.34836	-2.13880	0.01095	662.06742	0.28668
4189	4374.58207	20.37747	9976.96729	596.49083	3.02403	0.04160	676.26967	0.42961
4190	3736.15055	11.59222	8740.96819	541.13981	1.19578	0.02516	498.87176	0.62554
4191	3379.53963	24.41455	11950.82473	508.46547	3.74575	0.06153	410.33057	0.52401
4192	2911.62709	17.00038	14633.96958	318.56022	3.80927	0.23041	252.89670	0.71668
4193	3741.29545	11.72634	7564.19113	839.34498	2.54922	0.02351	817.22122	0.51184
4194	3226.38308	19.42334	13251.42274	459.74815	3.22032	0.19386	406.54766	0.75867
4195	4420.25571	17.91886	7194.69140	490.87678	1.30895	0.03352	565.97096	0.31935
4196	4954.71565	6.65945	10975.22942	326.96785	-3.71626	0.00630	455.21363	0.21325
4197	4333.27818	18.58888	7798.02516	345.74164	6.75710	0.08848	380.55833	0.46651
4198	4408.13138	15.44615	24901.31820	97.22630	-2.98163	0.00038	74.04012	0.34904
4199	4968.32065	9.87592	8848.47869	322.77822	0.58276	0.00761	447.32314	0.14959
4200	4629.21772	7.72790	16340.74897	120.54569	-0.87822	0.00003	145.65789	0.07981
4201	4790.42827	10.24651	11223.44801	492.86044	0.24166	0.02577	632.31482	0.42965
4202	4894.43374	9.49139	10173.49172	536.35116	-0.61348	0.02638	704.61667	0.33950
4203	4944.94138	13.14769	9375.99020	452.30445	1.58185	0.00970	679.08321	0.18980
4204	3612.09308	13.25047	20623.93953	257.96659	0.97189	0.01668	329.72265	0.24852
4205	3857.00237	23.88235	12068.42575	904.07991	6.63806	0.02180	903.81883	0.06773
4206	3910.83825	13.57474	11161.75480	294.74033	-0.88672	0.03065	292.58124	0.50331
4207	4339.83484	17.15555	8218.26978	733.46870	3.06818	0.03866	793.51941	0.38247
4208	4692.00031	18.29431	16768.04520	447.32651	4.62891	0.03026	574.28711	0.17444
4209	5019.73119	13.79335	8422.28691	313.11802	2.45690	0.01654	457.74248	0.20752
4210	3841.05122	20.23138	6346.93829	709.36666	2.19905	0.02463	725.93567	0.50614
4211	4837.46287	15.70931	8440.34174	445.34845	3.48811	0.02622	654.26592	0.24777
4212	4785.00389	15.63979	7000.98912	449.92273	2.90078	0.01570	657.71979	0.19239
4213	4967.16818	10.92384	10211.70272	88.34256	-0.26971	0.00277	83.85063	0.30595
4214	4690.07384	13.52305	9678.28818	378.50131	2.03059	0.01998	448.42528	0.24189
4215	4163.47012	12.70660	12823.86041	198.70717	-1.54687	0.00577	244.98167	0.15820
4216	4792.51578	15.79753	7089.59252	444.94956	3.01062	0.01447	655.47464	0.20680
4217	4836.79099	9.91149	7107.95702	146.53945	1.26228	0.00552	176.30693	0.27611
4218	4464.65477	21.77086	7681.63244	573.61355	2.84288	0.02895	743.60099	0.31999
4219	4412.26242	17.91918	7007.79784	627.53900	2.85999	0.03290	668.90798	0.47038
4220	2780.55887	14.53062	13334.38331	294.78872	5.24809	0.23896	165.46439	0.79255
4221	5074.36870	13.17266	9875.63181	113.42793	0.09554	0.00131	133.97035	0.32224
4222	3503.54945	15.34621	11527.86899	482.74158	2.73191	0.10903	435.46935	0.57151
4223	4844.71661	15.30335	9379.67337	411.53563	2.47486	0.02455	597.27492	0.30913
4224	4425.49738	17.34473	10713.28596	754.87097	2.08985	0.03602	814.90653	0.36593
4225	4005.69086	9.89683	9387.16180	330.27660	-1.75960	0.00781	388.39586	0.17920
4226	3122.76447	16.46160	9364.48100	544.42461	3.92061	0.19541	462.91500	0.66375
4227	4975.41062	10.28655	9095.22824	280.67096	2.17105	0.00442	420.70834	0.17431
4228	4077.43166	21.81708	8923.48166	852.23805	2.76421	0.03882	834.75020	0.50336
4229	4688.22188	13.54375	9671.04419	405.75827	1.28508	0.02039	491.06964	0.23096
4230	4496.44062	12.61559	9338.00784	659.80220	-1.00930	0.02467	771.55346	0.23932
4231	3132.28999	15.60450	6674.83915	365.71234	2.47347	0.01516	313.86866	0.28231
4232	4031.31528	9.37550	11932.60014	207.23966	-2.65575	0.00358	238.87582	0.21877
4233	3792.15253	20.08317	11695.99796	436.25062	-1.32587	0.07827	429.85598	0.88809
4234	4347.64311	23.78246	10445.40562	663.34451	2.99795	0.02891	708.03926	0.57021
4235	3618.82703	25.28343	9550.04159	102.90564	3.49560	0.00906	54.55489	1.17837
4236	4684.76325	7.58443	19838.70243	77.78099	-4.50655	0.00000	66.36065	0.28512
4237	4789.84480	15.73861	7067.20020	439.41271	2.98203	0.01505	654.17736	0.21217
4238	4767.53541	8.09958	9402.00165	405.36851	-3.20216	0.00319	586.01115	0.07817
4239	5125.90698	10.30370	9328.82339	61.22983	-4.39253	0.00063	42.31937	0.76724
4240	4747.73905	15.99683	20943.49930	422.43060	4.09534	0.05993	579.05574	0.64374
4241	4256.17330	23.34174	12457.86159	611.58536	4.39428	0.01017	737.51042	0.12339
4242	5025.73327	18.30634	10074.34946	417.59264	2.19771	0.01730	600.23526	0.24837
4243	4930.70005	7.63147	9086.87368	317.26542	-0.84934	0.00048	470.05222	0.03310
4244	4467.40595	20.39880	13571.78906	406.92281	7.08889	0.07184	494.46497	0.47880
4245	4883.78020	19.79346	11116.11912	353.80942	3.28435	0.06787	486.17206	0.39431
4246	4420.18664	17.91349	7195.78890	563.17455	1.37461	0.03575	680.61398	0.32420
4247	4952.12425	10.76818	10054.89362	137.07943	1.98301	0.00368	170.90917	0.24405
4248	4238.33739	17.45618	7559.57897	622.58588	1.65183	0.02760	700.64834	0.45326
4249	3831.85972	15.80151	8603.78805	691.08458	2.26314	0.03754	647.50973	0.54616
4250	4844.53438	12.70726	16848.52684	278.81592	4.28062	0.02487	377.24214	0.29537
4251	3805.88215	25.39326	6679.21184	79.62645	3.44512	0.00653	28.73553	1.50212
4252	3577.19075	13.34217	5257.76854	563.62861	1.67518	0.04175	525.44760	0.72569
4253	4844.36217	15.29519	9372.04705	309.40639	2.34490	0.02378	443.95958	0.31547
4254	3835.07537	20.21201	6299.97516	653.29216	3.13646	0.02846	641.85492	0.35984

4255	5074.26250	13.15777	10073.25943	105.98397	-1.59424	0.00109	125.72698	0.37888
4256	4146.80750	16.37229	9050.76688	665.01524	-1.67626	0.01868	737.86103	0.46821
4257	3130.59057	18.12267	10239.87505	475.78370	4.35494	0.19118	451.85117	0.87753
4258	4449.89163	20.08369	13448.39036	454.37392	7.33688	0.10626	542.69401	0.32442
4259	4657.10024	19.51075	12292.86088	439.92129	4.33134	0.10816	589.67493	0.42572
4260	3248.85151	19.85981	13766.23318	367.16021	1.68624	0.18731	322.43321	0.94213
4261	4504.65651	16.56309	8545.76928	511.51498	0.18625	0.02863	603.84060	0.30300
4262	4366.67709	18.85688	9569.65146	404.68486	3.24418	0.04745	437.82642	0.39509
4263	4824.66652	20.84782	7836.41183	624.47871	2.79593	0.06274	770.88140	0.37006
4264	4820.28456	22.40480	11786.46184	565.20121	3.27203	0.01554	749.91713	0.27828
4265	4976.56612	23.09388	10175.38860	491.45146	2.36474	0.04579	569.36610	0.79136
4266	4420.18664	17.91349	7195.78890	563.17455	1.37461	0.03575	680.61398	0.32420
4267	4282.10023	17.71484	7478.63664	688.27720	3.71585	0.04229	701.01988	0.50305
4268	3540.94327	17.34146	8065.07572	423.57481	-1.08636	0.04079	429.58919	0.61930
4269	4743.07346	21.75203	10196.39780	541.56479	3.53077	0.07467	691.59229	0.43378
4270	3832.09883	15.77426	8629.35587	746.16614	2.28747	0.03509	760.74339	0.52273
4271	5113.72492	10.98425	16248.12193	115.16121	-0.21293	0.00206	134.93789	0.15657
4272	4293.50697	15.22095	12176.87919	542.17586	0.53896	0.02346	650.78863	0.25122
4273	4423.90170	17.33950	10713.07705	724.51379	2.79569	0.03692	783.10137	0.36651
4274	4534.69421	20.23065	24728.07748	380.40515	5.98531	0.09220	476.92443	0.38699
4275	5023.62580	18.26176	9246.34098	352.05200	3.18217	0.01599	511.30785	0.25469
4276	4523.59374	20.93838	15206.96026	510.63759	3.94423	0.01390	641.45290	0.25301
4277	3832.73830	15.80096	8628.91018	653.57515	2.52343	0.03503	606.70381	0.54883
4278	4683.13536	15.14061	10805.46576	42.04780	-2.27135	0.00153	16.68315	1.06475
4279	4515.53930	20.92567	11709.49215	757.26994	3.72501	0.01438	914.47812	0.23317
4280	3851.27991	23.87604	12057.75481	666.32759	7.22057	0.01800	711.52256	0.06561
4281	3180.54946	15.84042	12261.32394	401.29525	3.11307	0.10423	340.64584	0.79261
4282	4958.17114	6.64993	9991.66370	406.05201	-2.53356	0.00727	590.58746	0.18754
4283	4606.82395	18.93924	8434.84959	496.45125	4.63613	0.03880	643.44418	0.31410
4284	4068.92389	25.71731	8936.04061	782.16046	2.14987	0.01200	813.18964	0.43688
4285	4606.13870	22.28714	8635.27390	591.19065	2.49211	0.04042	735.39606	0.33954
4286	4737.88504	15.91613	12186.07358	333.91545	2.58638	0.04799	454.69709	0.42764
4287	4748.70781	14.78869	9627.48875	410.62856	2.82807	0.05647	568.51121	0.68027
4288	4180.71941	23.76496	8398.77370	796.91126	3.03986	0.06291	904.37450	0.58345
4289	4552.40094	17.75378	8382.99605	528.35899	1.41300	0.02596	694.61660	0.29931
4290	4720.31845	19.30609	9894.81376	652.87731	0.47617	0.04008	855.21694	0.28445
4291	4251.97853	18.98709	7171.49285	740.37097	2.82476	0.03776	805.28364	0.45627
4292	4724.33432	21.58222	10066.48990	498.33870	4.08446	0.06450	624.39959	0.45237
4293	4500.48099	22.58489	7586.18143	567.09480	5.17787	0.14788	667.78942	0.73862
4294	4969.14722	17.23534	7939.98402	680.67142	0.56467	0.01744	884.41264	0.30551
4295	3756.96721	12.49187	6503.75286	336.66096	-2.09091	0.01343	334.28275	0.41390
4296	4837.42070	15.70605	8438.99812	370.63616	4.64251	0.03229	550.98521	0.20948
4297	4977.63883	17.57395	8069.62200	633.61914	1.50531	0.02047	831.51994	0.31282
4298	3380.21658	24.41732	11964.01090	644.52754	4.09606	0.06094	557.91068	0.52518
4299	4954.13195	7.17063	9229.43978	291.21453	-5.56103	0.00027	423.55538	0.03418
4300	5117.45488	10.93371	10225.14817	68.22284	-3.87818	0.00078	55.64146	0.72838
4301	4619.60784	18.70036	8508.19349	433.62125	4.61880	0.02852	549.39621	0.37773
4302	4709.85907	11.01767	15931.95479	89.36705	4.09348	0.00491	71.26004	0.18956
4303	4449.91329	19.58067	5686.22557	566.64913	2.72106	0.03087	642.10185	0.44629
4304	3185.79365	18.30284	10618.45020	432.84972	3.05065	0.17855	393.01029	0.80654
4305	4410.87674	17.94068	7009.62327	663.83208	1.39720	0.03284	743.86861	0.46709
4306	4803.54877	22.30010	9963.20663	642.78703	5.04736	0.02157	844.88927	0.25777
4307	4462.77503	21.72586	8024.92587	660.94476	3.08351	0.02887	838.10933	0.37501
4308	4573.99082	7.87970	8886.47219	318.68143	-3.64563	0.00567	430.00869	0.16080
4309	4237.57725	17.69306	13918.13760	75.18413	0.89036	0.00657	33.15800	1.24643
4310	5089.41769	10.04542	16514.41321	102.50604	-0.50082	0.00213	109.85630	0.24463
4311	4606.15648	22.27751	8637.47862	680.53023	1.83638	0.03846	839.84501	0.42332
4312	3217.54526	16.53693	12197.97950	446.77470	1.79189	0.08736	414.25322	0.75556
4313	3669.19575	14.09290	9915.67438	530.03363	2.13108	0.07725	497.56594	0.64558
4314	2560.17862	15.07160	4165.58548	489.87149	5.28220	0.27634	505.20409	1.32833
4315	3385.00848	20.14428	9779.14280	112.64141	4.44161	0.01655	75.71925	1.02647
4316	3539.36558	9.35951	7246.52413	557.64643	2.49489	0.04686	465.60394	0.59449
4317	3506.06868	9.30954	7985.33395	387.88463	-0.12477	0.03717	313.12920	0.41945
4318	4762.91977	18.34314	10581.79750	669.45690	1.58712	0.04757	841.31263	0.31330
4319	3393.79068	11.71488	7569.77684	448.40836	2.04707	0.09062	310.88522	0.72565
4320	4768.08793	18.36485	10674.92762	523.88215	2.31548	0.03610	657.94265	0.37685
4321	5008.75011	10.08705	9141.52441	276.15668	1.06414	0.00450	403.40442	0.14775
4322	4710.38408	15.80076	11082.69883	513.33203	4.02302	0.05786	670.13795	0.30709
4323	3137.87715	15.59722	6735.13816	315.97019	1.53095	0.01678	267.06769	0.18202
4324	4194.82495	23.77420	8435.19807	709.34837	2.07432	0.05313	797.02039	0.59260
4325	2554.06434	26.40748	11215.31583	809.21861	8.80610	0.17684	489.83089	1.33405

4326	4289.97654	18.11256	6891.15226	697.80714	1.72852	0.05569	742.93511	0.42869
4327	3475.52965	13.92017	7300.93734	525.43599	1.97681	0.05834	491.92402	0.59014
4328	4899.29543	16.87250	8796.96096	410.94201	3.14346	0.04579	534.96912	0.42691
4329	3736.08024	11.51814	8789.96233	545.37137	-0.16769	0.03044	529.78805	0.61385
4330	4423.42384	11.43010	8405.32233	501.84006	-2.58819	0.01082	613.28288	0.27050
4331	4885.62713	9.31714	12500.19951	503.40611	2.22607	0.01825	735.40547	0.27345
4332	4457.46727	19.57652	5716.78628	660.43373	3.23207	0.03873	779.00728	0.41149
4333	4298.92717	15.22460	12135.38641	548.98797	-0.44757	0.01809	663.33482	0.32082
4334	4576.28693	10.21276	9304.30975	348.47235	-3.44980	0.01911	430.37301	0.35501
4335	3670.84451	14.07978	9967.15197	533.70033	1.36193	0.07032	548.15832	0.65738
4336	3736.16920	11.52577	8788.93674	483.68364	-0.27010	0.03134	450.80364	0.60834
4337	4932.60684	7.61285	9905.88427	326.29685	-4.08251	0.00022	493.83222	0.03289
4338	3568.54333	17.61823	7373.97905	438.27043	0.07175	0.08740	437.82671	0.82566
4339	4967.42151	9.86034	8851.38987	308.76614	1.23261	0.00740	429.46945	0.16511
4340	4851.37426	15.83576	8853.66389	422.49872	3.50514	0.02941	627.63577	0.25535
4341	4336.53548	16.10518	9316.65072	435.07973	5.80916	0.10229	587.68562	0.43666
4342	4573.02907	7.61903	8702.78400	363.00565	-2.80476	0.00416	503.06312	0.06803
4343	4035.13472	20.84082	14591.61635	134.13717	3.50629	0.01176	128.06245	0.54829
4344	4399.64426	6.56821	8084.79297	391.68764	-2.05017	0.00290	504.44544	0.06579
4345	3770.39962	9.64955	8354.58986	568.89860	0.67214	0.05265	568.70093	0.57521
4346	4970.96262	10.94176	10234.15616	81.52005	1.57885	0.00290	70.87062	0.34922
4347	4846.27387	13.58693	12135.12338	577.97016	2.01011	0.03490	737.57447	0.44717
4348	4349.81964	23.79194	10470.04896	796.63846	4.73212	0.03892	808.45872	0.55213
4349	4415.11758	15.24805	23744.29188	80.65163	-2.13782	0.00052	46.44527	0.28925
4350	5012.16887	6.80982	9326.62132	281.18638	-1.60443	0.00112	429.76166	0.03369
4351	4766.46070	18.40540	10653.51508	576.40553	1.93740	0.04551	734.12928	0.31789
4352	4893.58350	9.45455	10018.13951	626.69889	-0.76130	0.02521	834.52667	0.40602
4353	5023.74594	18.25263	10109.18534	419.59729	2.28944	0.01715	601.88489	0.24521
4354	4281.25253	14.22183	6827.17577	586.38583	-1.38905	0.02545	675.58375	0.35459
4355	4615.56059	7.81765	16730.25056	145.43737	-3.58479	0.00002	199.65358	0.11513
4356	4442.13709	21.74452	7598.48309	506.65086	1.45225	0.03150	639.63439	0.31216
4357	4659.25051	19.55183	12690.69911	395.22641	4.28612	0.09640	531.24807	0.49028
4358	4417.32689	17.81094	7203.31762	594.57873	1.01820	0.03037	702.51328	0.45025
4359	4748.05009	14.79256	9632.61381	328.28201	3.14971	0.05456	445.04763	0.58113
4360	4564.20979	20.62918	17823.34932	404.32176	5.93292	0.08447	495.69651	0.46921
4361	4247.96036	18.97107	7138.52948	810.48997	2.80689	0.04390	871.28185	0.40014
4362	4290.11784	11.00388	10582.25794	123.74285	-2.57676	0.00034	134.71947	0.77775
4363	4424.84938	22.70231	8494.61814	632.85902	2.73976	0.01537	842.39007	0.23537
4364	4031.72997	25.76566	8812.61305	1055.43009	3.90747	0.01711	1039.63980	0.43699
4365	4131.31246	12.41518	12010.87731	218.67466	-1.38423	0.00519	257.95924	0.33701
4366	4341.08830	23.78298	10418.20569	871.06608	3.55661	0.02893	912.07734	0.57556
4367	4558.95434	20.52761	17125.18132	513.07769	4.49990	0.09879	646.77387	0.39441
4368	4432.06139	15.53976	6481.55845	636.89011	3.28597	0.02571	711.35037	0.35308
4369	5019.66322	13.79516	8419.95571	340.36754	1.88421	0.01655	507.95927	0.20066
4370	4957.60848	6.62733	10225.71471	417.23325	-2.71780	0.00599	604.04605	0.20668
4371	4779.19972	10.38752	11752.68120	428.48012	-0.63357	0.00894	557.95523	0.11818
4372	4567.01432	13.91936	21143.93915	65.27774	-4.05056	0.00005	32.51618	0.57036
4373	4369.52741	18.86405	9572.92574	463.23362	3.20655	0.05364	518.02965	0.33221
4374	4445.58365	20.42596	16184.87845	745.37478	3.40348	0.01538	903.88603	0.23897
4375	4236.38116	24.70571	8284.85125	747.20214	1.70989	0.01955	861.06182	0.38477
4376	4464.25953	20.37888	10310.05522	873.28442	3.70596	0.01936	1030.41452	0.30295
4377	4339.25217	16.15495	9357.75230	585.97945	5.23538	0.10264	806.45475	0.43496
4378	5008.64202	10.08459	9140.54983	318.60648	0.13269	0.00464	474.57655	0.14202
4379	4805.78356	22.30935	11462.62589	622.10254	3.54044	0.01520	805.43112	0.27038
4380	3385.40405	24.43844	12001.27296	516.73877	2.95843	0.05690	417.09890	0.64724
4381	4090.18472	18.97506	6760.05877	681.04714	3.85582	0.06363	673.08929	0.61752
4382	2995.63694	24.94184	7129.67953	466.24389	5.76637	0.15624	247.26345	1.02185
4383	5116.78334	11.28095	12920.56117	56.62608	-0.80885	0.00051	34.86582	0.47266
4384	4432.38898	15.51221	6380.09581	691.85796	3.61045	0.02957	753.97812	0.35081
4385	4418.36373	22.64463	8510.64886	614.02020	3.48127	0.01557	816.79143	0.28937
4386	4007.86690	9.36737	8982.15783	269.29855	-3.33773	0.00637	310.62263	0.22881
4387	3610.10798	13.22942	20578.26835	342.39884	0.86924	0.01754	436.64247	0.26110
4388	4381.00400	18.73725	8621.59425	478.95809	0.59480	0.03983	505.22187	0.37484
4389	3388.74506	17.98663	19459.77887	392.13390	1.43705	0.08199	328.19004	0.68704
4390	4688.76215	18.30460	16783.13332	466.57002	3.92702	0.03083	633.49121	0.17187
4391	4785.86651	22.27002	10675.02586	479.70849	3.43498	0.04910	605.28815	0.51820
4392	4693.90692	13.61583	9922.19390	364.24488	4.34072	0.02286	435.09878	0.21728
4393	4461.05292	21.71611	8023.72750	532.99602	2.82369	0.03028	684.65561	0.36133
4394	2968.70750	24.89375	6812.26434	497.80729	5.53784	0.16638	247.47848	1.01207
4395	3795.66806	25.25522	6667.47533	77.26955	4.54751	0.00684	31.46946	1.41290
4396	4337.13810	19.38311	6373.88401	613.65846	2.36132	0.05715	672.74160	0.39401

4397	3540.56238	17.39697	8010.70191	400.41682	-0.04183	0.06002	392.05982	0.51762
4398	3424.73954	19.73107	18006.54696	266.12240	1.00639	0.12775	180.87473	0.72581
4399	3247.72232	19.83847	13342.62773	480.42309	1.97485	0.18004	452.75577	0.91757
4400	2566.70258	15.48973	10788.77653	391.75306	5.27665	0.29083	331.33930	0.71950
4401	4693.91115	13.45460	9650.13516	378.76054	2.30480	0.01934	447.27853	0.23320
4402	3176.90872	15.81374	12241.67827	511.21062	3.67311	0.11837	439.62604	0.56264
4403	4006.87354	9.90529	9403.38977	313.82374	-2.12966	0.00959	388.84326	0.17721
4404	3773.33470	12.03595	9410.68966	680.33160	1.02192	0.03285	684.23904	0.53090
4405	4845.18767	9.00395	9467.75222	95.47806	-1.01020	0.00374	76.67865	0.75015
4406	4909.54571	13.65925	8902.90706	493.64827	1.91647	0.01638	722.45586	0.21957
4407	4781.16077	10.46930	11864.91517	511.84300	-2.29583	0.00826	688.51113	0.11772
4408	2911.96826	15.87245	15892.52341	399.70391	3.85791	0.22330	352.65928	0.85167
4409	3692.65162	14.12786	10407.49258	415.95363	-0.40714	0.05248	392.05939	0.67588
4410	5013.91911	6.85077	8892.68299	289.86148	0.40432	0.00133	434.71489	0.03186
4411	4687.24684	13.63257	9893.22081	404.29811	4.82320	0.02330	496.16587	0.20545
4412	4267.58811	16.19997	7800.80182	702.57399	0.84857	0.04227	773.33294	0.48528
4413	4606.45898	22.21906	10985.86225	279.41704	4.05597	0.07142	275.33080	0.58432
4414	4628.51271	22.28152	9821.66076	744.75343	2.54122	0.03894	922.49948	0.41490
4415	4604.92478	22.17295	10973.65217	460.15354	5.66919	0.09434	546.94040	0.58747
4416	3905.60499	24.68419	10048.54853	977.59263	5.71931	0.01546	947.33018	0.36321
4417	4918.02314	10.79488	8768.36733	211.11414	0.75216	0.00653	304.33381	0.08798
4418	4843.49069	12.55972	13049.58289	347.72917	3.08862	0.02168	480.58263	0.32240
4419	4701.22060	18.31813	16551.92140	384.83906	4.88927	0.03387	510.10452	0.12601
4420	3793.03603	24.12927	11044.14309	625.00890	3.40785	0.03856	550.86120	0.82132
4421	4894.29476	9.48054	10012.20645	602.68093	-0.64629	0.02549	766.72017	0.33098
4422	4672.56528	20.17113	9979.68211	371.79228	4.39376	0.04518	524.88102	0.26368
4423	4874.60253	7.71039	9721.80784	452.17445	0.56362	0.00913	628.18538	0.24272
4424	3651.24277	21.92260	12599.40198	98.75043	3.59334	0.01410	55.10365	0.71343
4425	4378.15126	18.83115	8559.08886	583.75139	2.53364	0.04370	620.24714	0.40431
4426	3656.91236	23.86073	10497.38107	1636.66620	8.88097	0.07078	1228.32561	1.07362
4427	4845.25717	12.67446	16805.40742	365.48569	3.49369	0.02340	507.43252	0.28126
4428	4642.48326	20.10959	8013.47009	431.19892	3.81703	0.04410	598.06800	0.32993
4429	3656.67493	23.86725	10510.27369	1023.57625	8.53027	0.07178	828.68593	0.81295
4430	3988.11671	22.96309	7949.91888	765.46563	1.88761	0.03398	802.97207	0.49773
4431	4617.77521	7.82939	16783.54578	133.54156	-2.13110	0.00002	176.10351	0.11003
4432	4822.76945	20.83029	7796.58559	462.60997	3.67219	0.06034	556.11321	0.42055
4433	3538.88143	9.33820	7479.37103	612.83476	2.55583	0.04436	559.29161	0.68740
4434	4337.22622	18.29736	6897.65567	551.52918	3.90163	0.03688	621.61358	0.52123
4435	4496.63287	12.62442	9334.98074	570.47037	-1.06643	0.02464	685.01323	0.28820
4436	4972.83285	8.58761	9173.24683	261.66141	0.49669	0.00323	386.14101	0.11720
4437	4070.62066	25.71097	8976.62961	818.25468	1.99607	0.01019	866.52371	0.44820
4438	4975.17189	10.29332	8959.00094	258.63426	2.90304	0.00472	378.75699	0.12053
4439	4790.76614	10.25147	11224.91006	384.46508	0.09640	0.02535	476.73850	0.39717
4440	4367.25792	18.79974	9614.66299	546.35118	2.88993	0.04271	623.05770	0.35323
4441	4742.40064	16.37322	9426.62681	56.25213	-0.98691	0.00240	46.38594	1.17550
4442	4010.20411	17.16164	5821.43411	426.76607	-3.18878	0.02667	496.35978	0.77895
4443	3755.92525	12.40878	6498.54826	330.43085	-0.84220	0.01439	365.24514	0.38714
4444	4373.20509	20.43295	9934.64532	614.35667	2.78974	0.04229	690.59395	0.46582
4445	3491.51568	23.92795	11550.93251	990.21584	9.43347	0.15842	737.49081	1.89805
4446	4486.75302	20.66909	9760.05997	448.65433	7.54244	0.10976	536.81418	0.49945
4447	2585.95481	26.29966	11539.64060	652.98831	8.20969	0.17267	406.80266	1.33435
4448	4783.16975	16.53345	9813.10249	600.69395	0.53672	0.03051	782.63124	0.30891
4449	4759.39439	19.85610	12634.57018	295.28494	3.82837	0.07361	364.43032	0.64135
4450	3694.23322	24.56467	6221.11984	612.35657	3.17019	0.04057	557.06504	0.46281
4451	4972.96202	8.58819	9176.93203	349.43629	-0.18686	0.00335	524.00608	0.11627
4452	4174.11834	12.25826	12530.42444	242.84363	-0.73190	0.00489	301.54589	0.21965
4453	4425.17724	11.51947	8409.81524	666.20516	-1.44265	0.01243	791.31156	0.18755
4454	4753.85645	21.57298	19590.12977	507.37405	2.92651	0.03156	675.81577	0.30301
4455	4606.66141	18.93074	8435.02946	499.98672	4.05326	0.03990	666.49320	0.30590
4456	4179.06781	18.96783	8269.16826	803.21884	1.86859	0.03251	853.54835	0.51874
4457	3909.03668	12.92676	12010.61615	482.92411	0.75472	0.03962	564.67407	0.45277
4458	4498.14748	21.28514	8794.86352	373.74778	5.07531	0.08169	380.30552	0.61874
4459	4377.15023	18.82391	8549.61785	573.17836	2.17953	0.04383	610.68936	0.41357
4460	4492.54849	21.08341	9210.41950	580.01177	1.87929	0.04473	754.71632	0.35521
4461	3376.95783	9.67954	6822.58186	247.37070	1.44558	0.05758	234.71258	0.45273
4462	4138.77446	19.38158	15221.40851	91.78476	1.64593	0.01163	54.08576	0.66425
4463	4680.50906	24.51407	8695.52564	393.14105	3.60135	0.06334	433.73803	0.96679
4464	3669.88181	14.07408	9935.04138	565.99484	0.80865	0.06172	564.34270	0.66518
4465	4580.70556	17.98936	8265.80999	428.68393	2.65520	0.02633	566.97636	0.31500
4466	3811.52690	23.70449	11054.32973	67.75289	3.03286	0.00676	24.03012	1.51288
4467	3501.07721	9.31478	7968.31460	495.84176	1.66584	0.03909	446.92244	0.48115

4468	4786.43664	15.65164	7007.55091	493.04401	3.71454	0.01416	715.78343	0.19333
4469	4443.23814	20.46647	8246.10664	420.26154	6.71167	0.08296	475.38756	0.57115
4470	4791.03773	15.76646	7078.38955	375.40010	3.93350	0.01490	553.52728	0.21029
4471	4803.84114	22.29439	10783.94980	680.38763	2.52485	0.01345	880.32842	0.27070
4472	4243.57802	19.06066	7235.25060	509.53639	3.74018	0.04930	558.27348	0.45140
4473	4549.76888	16.03055	11286.83006	262.26013	5.61931	0.07440	357.95135	0.38470
4474	4707.08250	11.12120	15928.96236	89.31876	3.19762	0.00742	87.65561	0.25438
4475	4769.51486	8.14960	9531.23920	301.89867	-3.40071	0.00275	437.35618	0.06421
4476	4770.20712	8.17837	9891.30701	308.27225	-4.33974	0.00267	443.94750	0.06900
4477	2925.29012	16.77663	14644.98748	467.48021	3.71113	0.23700	419.36959	0.70959
4478	4145.22778	16.48391	8935.30031	581.03440	-1.16476	0.01840	648.55618	0.35606
4479	4441.34433	20.41431	8251.83930	600.96733	5.54807	0.11057	675.23758	0.56734
4480	4800.20524	16.87451	9925.19865	589.77938	-0.00032	0.03251	790.07158	0.36650
4481	4003.65591	9.88099	9353.12875	334.22192	-2.01650	0.00803	431.44849	0.18384
4482	3432.52317	8.13077	13747.58063	280.51412	1.37957	0.03425	287.20372	0.36806
4483	4528.00925	20.08495	21832.02121	474.11475	4.78706	0.11743	618.07918	0.26966
4484	3394.49256	9.57392	6825.27494	361.90183	1.25084	0.04875	303.60595	0.58090
4485	3776.44582	9.57259	8280.34608	439.72087	-0.71138	0.04439	406.02883	0.63098
4486	2944.98461	24.91958	6670.05745	438.13704	5.74546	0.16700	218.63727	1.04738
4487	4462.57657	21.72992	7679.75394	448.09100	3.33538	0.03014	548.28065	0.34541
4488	4417.05979	17.83125	7197.97842	661.81583	1.51941	0.02997	781.99299	0.32498
4489	4941.64965	13.05839	9344.67094	348.35054	2.38865	0.00936	518.61017	0.18558
4490	2475.60212	13.54904	4280.20730	434.59423	6.34401	0.11499	318.55042	0.93747
4491	4247.00368	19.07304	7252.67129	677.95308	4.43741	0.05484	741.22964	0.40228
4492	3980.53979	22.97836	7922.55007	539.68794	1.95166	0.03521	527.59955	0.51115
4493	2490.91958	15.14434	3745.02210	475.59466	5.47445	0.36005	546.41462	0.71565
4494	3732.79238	13.08325	13705.69868	204.51742	-0.62421	0.00377	255.57978	0.27723
4495	4145.25441	16.46658	8944.09333	556.73186	-0.54810	0.01843	610.70921	0.40729
4496	4341.26824	18.31640	6914.43671	649.30343	3.80953	0.03756	682.00954	0.44867
4497	4286.60479	15.11546	12209.37060	587.56773	-0.09359	0.02545	719.11541	0.33650
4498	4617.19545	21.71264	15583.24518	440.45379	5.60837	0.06212	512.21524	0.53016
4499	4717.52397	19.26357	9884.85389	620.85315	1.27853	0.03982	789.13951	0.28140
4500	4412.00145	22.74383	8365.32189	716.61599	3.30646	0.01463	907.65583	0.30238
4501	3576.40302	13.41041	5162.36651	589.79298	3.04794	0.04135	550.40378	0.72916
4502	3833.10591	15.81008	8625.02971	828.49912	2.41947	0.03267	830.82196	0.54022
4503	3293.18300	17.26744	7426.52253	339.49273	-0.03015	0.08436	241.82764	0.79541
4504	4759.97139	8.18780	9986.53552	318.55405	-3.37486	0.00270	444.95764	0.07791
4505	2903.17984	16.52171	14819.15033	482.85342	4.19267	0.19979	472.12443	0.74271
4506	4691.32264	15.35314	14208.90868	477.27628	4.36793	0.06824	672.11367	0.27044
4507	4690.47495	15.37485	14113.13085	423.21911	3.70932	0.05731	595.64623	0.29360
4508	4466.02029	20.48159	16395.25419	677.46048	3.42126	0.01616	824.48618	0.30280
4509	4573.58917	7.61646	8612.79352	316.37675	-0.90584	0.00497	424.94547	0.13437
4510	5098.46348	12.99094	12284.34094	58.92830	-2.05234	0.00086	35.32170	0.36299
4511	4917.97411	10.74593	8910.03361	144.19376	2.15923	0.00497	182.65227	0.13465
4512	4381.27483	18.87015	8611.04770	498.32408	2.55479	0.03811	493.37189	0.41237
4513	3767.61554	9.58771	8333.14750	422.26842	0.66403	0.06404	364.08963	0.50356
4514	3527.21810	23.36788	9110.31589	1035.68144	6.94762	0.06520	731.60226	1.25422
4515	3652.67332	23.93728	10499.70357	1166.74992	8.20612	0.06945	931.63698	1.12007
4516	4365.58482	18.84451	9571.09256	453.97044	3.80270	0.04956	515.08408	0.38517
4517	4010.96875	17.15782	5801.46171	435.21606	-3.00257	0.02675	502.03153	0.82244
4518	3864.86618	23.84072	7257.88608	590.30584	6.69913	0.06302	572.93388	0.44455
4519	3396.10720	11.71526	7559.33017	560.45446	1.83131	0.08263	484.01373	0.72325
4520	4568.47335	22.51661	13113.62556	563.24990	3.92642	0.02842	709.37209	0.42242
4521	3754.16356	24.17348	10804.37076	652.85881	4.44864	0.05179	590.17953	0.76158
4522	4782.35500	16.50824	9773.67891	569.27066	-0.32582	0.02923	743.05080	0.31416
4523	3832.87882	20.54879	12095.30891	303.95081	-1.57491	0.08346	257.70347	0.88376
4524	4673.18921	18.86587	12278.15109	642.52047	4.35364	0.05062	829.88463	0.37225
4525	4255.95921	23.33069	12461.60803	665.29834	4.23984	0.01271	811.05201	0.12670
4526	3899.32243	13.47813	11238.86084	346.86085	0.06809	0.03488	368.17971	0.38033
4527	5113.28233	10.99301	13865.87225	190.52407	3.03508	0.00308	277.17791	0.12059
4528	4845.13664	15.31054	9381.81980	384.33589	2.23113	0.02415	559.46999	0.31427
4529	3581.91512	13.22475	5361.42659	633.31675	1.85353	0.04325	605.95234	0.57228
4530	3572.09105	23.29127	9343.22893	831.14203	7.67863	0.08744	546.03171	1.25872
4531	3833.32622	15.80959	8630.38336	776.70025	2.44940	0.03481	764.75123	0.55548
4532	4441.34073	21.73216	7593.17222	462.95476	2.57030	0.02971	583.54470	0.31029
4533	4530.43918	10.83191	17176.40131	93.72273	-1.80313	0.00003	101.07292	1.16886
4534	4748.36205	14.79498	9624.72807	455.41892	3.78259	0.06111	634.39955	0.59712
4535	4838.88418	15.72145	8329.10078	394.30341	4.38098	0.03242	588.02374	0.20031
4536	4784.26054	15.48136	7007.63291	465.45426	2.41533	0.01372	673.63202	0.23791
4537	3771.91039	9.64058	8335.91816	515.43645	0.13567	0.04923	514.43175	0.56395
4538	4687.45890	21.35286	17485.86308	353.59108	4.87649	0.06639	418.21514	0.60249

4539	4692.73660	15.39434	14143.11412	291.97630	4.76490	0.06370	405.43090	0.34896
4540	3518.10634	9.40516	8288.05514	310.61742	-0.72129	0.02837	202.73342	0.53456
4541	4419.54760	15.24468	23864.01145	70.30253	-2.78828	0.00023	41.64745	0.26370
4542	3293.88848	17.29392	7431.15067	422.58491	0.34612	0.08177	361.58259	0.77169
4543	4538.66274	15.87794	11179.39994	487.89467	4.89907	0.08833	685.67835	0.32761
4544	4966.31083	9.84751	8610.62909	334.19248	0.16215	0.00682	469.66319	0.15669
4545	3928.94166	18.53122	7263.48705	647.78833	6.18922	0.06149	516.11459	0.62291
4546	3931.68939	20.08365	9075.63599	798.17479	6.15748	0.05991	687.18671	0.69084
4547	3540.96640	9.43990	7203.80392	763.08692	2.92172	0.04753	713.30837	0.55734
4548	5013.28739	10.01099	9474.55944	301.20632	1.24754	0.00477	449.36482	0.15212
4549	3874.19971	20.23111	12836.06781	97.17224	3.44655	0.01327	52.83963	1.01976
4550	4705.73901	19.20152	9871.25666	591.88702	0.83834	0.04137	784.12572	0.28761
4551	4425.85915	11.53631	8418.98420	529.11663	-1.18426	0.01155	615.57902	0.21162
4552	3542.77104	9.53820	7215.24719	745.01401	3.42577	0.04808	712.80109	0.64310
4553	4079.88657	21.82043	8933.90718	781.21138	2.86744	0.03101	785.28246	0.53064
4554	4380.46954	18.87678	8606.29765	593.69044	1.32385	0.03965	669.91498	0.42622
4555	3629.72394	22.41475	12231.78277	174.12095	4.18073	0.01588	169.26824	0.58857
4556	4785.86651	22.27002	10675.02586	479.70849	3.43498	0.04910	605.28815	0.51820
4557	3768.80485	11.98097	9264.64572	534.33835	0.21283	0.03427	531.69729	0.51372
4558	4084.91717	18.98336	6712.76706	787.01619	3.18386	0.07534	774.73085	0.60909
4559	4957.73032	6.62863	10216.00870	445.99208	-2.85404	0.00620	645.08635	0.20419
4560	2952.55926	24.82149	7171.19519	524.55352	6.14156	0.15749	299.29459	0.95115
4561	4918.46454	10.76807	8912.73147	163.73085	2.24885	0.00515	222.05941	0.13770
4562	4037.19190	25.73898	8846.58889	759.67630	4.11200	0.01687	766.71501	0.45245
4563	3751.62149	12.29104	6462.49325	335.38070	0.20708	0.01798	353.27033	0.46285
4564	4220.59224	11.56515	11241.02802	143.92275	-2.69849	0.00060	172.51220	0.70506
4565	2461.35467	14.13608	4194.05684	460.49876	6.22507	0.28240	505.79502	0.26418
4566	3179.76731	15.86827	12226.53586	423.92420	3.54589	0.10875	353.54753	0.68470
4567	4890.31977	9.34660	10043.99987	473.83416	-1.26564	0.02280	619.56507	0.41356
4568	4689.21636	15.34974	14128.11117	364.91782	3.70509	0.06418	516.62084	0.34840
4569	4802.19923	15.93271	7155.75113	501.55531	5.25014	0.01562	729.23298	0.18044
4570	3191.59292	16.69170	7069.83793	411.88569	1.62206	0.10001	359.46223	0.65655
4571	3770.93428	9.64951	8362.28403	541.33387	0.33320	0.05507	554.28319	0.58209
4572	3914.29306	12.92870	12495.55521	353.47689	-0.38521	0.03331	388.00380	0.30819
4573	4461.86835	21.77930	8005.88800	434.60069	2.69995	0.02715	549.49487	0.31291
4574	3915.10866	12.96120	12064.54343	459.02078	-0.41980	0.03059	522.48292	0.45616
4575	4918.26846	10.72589	8905.12153	173.16835	1.91929	0.00474	246.85225	0.12924
4576	4293.53743	15.05101	12165.35141	450.31704	-1.69374	0.01845	528.13609	0.36257
4577	4714.45764	17.85987	16086.87148	365.57925	3.15151	0.02384	483.69021	0.21134
4578	4557.17289	20.52551	17623.44867	538.76637	4.86129	0.09675	677.61656	0.39674
4579	4996.62964	6.53560	11176.90751	204.74724	-3.81304	0.00088	291.63334	0.05442
4580	4425.84117	11.52729	8402.09054	578.63355	-1.22035	0.01094	730.34231	0.25697
4581	4499.48329	22.42044	7745.81536	430.45676	5.98460	0.14368	468.94104	0.75660
4582	4423.59968	11.42970	8383.53824	579.59094	-2.59890	0.01084	712.45780	0.29460
4583	4237.30578	23.40944	12370.04265	820.73217	2.52943	0.01131	935.00446	0.16023
4584	4914.63608	13.70923	8094.49388	377.93858	2.99447	0.01749	565.22348	0.20188
4585	3574.84164	13.34341	5198.37410	672.69042	2.90987	0.04003	653.59829	0.66594
4586	4574.25878	8.00658	8706.25051	270.86349	-4.14501	0.00542	355.63406	0.17317
4587	4143.05289	12.93273	12634.18383	238.06860	-0.23518	0.00602	295.09806	0.12214
4588	4711.41966	17.91519	16180.30023	379.34267	3.24722	0.02414	505.70681	0.21686
4589	4574.88997	20.69916	17297.62051	498.55038	5.46356	0.09356	638.01855	0.43173
4590	5167.79224	12.78106	11253.66126	43.29480	-3.28889	0.00052	21.16749	1.16826
4591	4736.87510	21.71289	10159.04979	419.60617	4.43121	0.06624	512.16953	0.51151
4592	3647.12700	12.78045	26925.16639	190.62613	0.02252	0.01463	173.97312	0.50788
4593	4972.94509	8.58369	9206.23282	171.03565	-0.07946	0.00392	218.36772	0.09794
4594	4248.26188	19.07841	7244.91869	510.90877	4.28357	0.05520	558.43301	0.39589
4595	2542.19622	14.87865	3487.21270	454.39914	5.06231	0.26516	491.70284	1.86253
4596	3275.21630	18.52683	18687.56372	516.11189	2.39448	0.19215	465.95693	0.97385
4597	4803.58656	16.91775	9955.10201	511.77590	0.13932	0.03186	681.79525	0.36837
4598	3786.04572	19.91702	9519.80428	586.68317	-1.14587	0.03315	578.51021	1.26942
4599	4410.63408	17.88700	7007.79491	655.02083	3.25572	0.03619	713.24639	0.42565
4600	4514.59148	20.93429	15093.69848	688.29951	3.74663	0.01291	839.51666	0.22365
4601	3238.44302	19.61999	13357.29910	414.21177	2.41641	0.16755	341.06124	0.87164
4602	4899.16073	13.49548	8985.16234	599.74255	2.75197	0.01600	845.97896	0.24308
4603	3397.30525	11.74055	7556.18652	499.65764	1.59822	0.08387	404.74444	0.71885
4604	3121.39534	15.67810	6744.00434	354.71636	0.55715	0.01156	313.40263	0.26715
4605	3994.47354	13.62611	16499.36325	138.46635	-1.25782	0.00254	155.11098	0.53510
4606	4336.59873	18.55072	14072.96086	57.66676	2.19644	0.01564	14.98248	1.52384
4607	2575.54249	26.39963	11248.47473	593.42146	8.12659	0.17881	267.96710	1.37772
4608	2969.06486	16.95728	15545.90047	384.87048	3.54567	0.13884	380.96023	0.83725
4609	4227.64861	24.74088	8260.65980	719.24195	1.73305	0.02160	788.45770	0.40036

4610	2871.83857	16.71259	13828.39416	299.95014	4.65406	0.23110	142.73559	0.70759
4611	4291.20674	18.11001	6899.07596	628.41910	1.50527	0.04914	692.70894	0.48209
4612	3453.39044	24.14709	11417.21794	1126.24388	9.69743	0.15190	785.17617	1.93651
4613	4310.64549	21.88657	8556.55333	677.51293	2.87360	0.03380	703.35794	0.56128
4614	4888.70777	9.39093	12659.76166	332.20599	2.75702	0.01867	497.02582	0.25743
4615	4894.25366	12.78141	7255.99431	400.74496	3.20331	0.04104	537.34307	0.31318
4616	4429.74882	15.58427	6446.68496	749.35798	1.82409	0.02420	859.30893	0.42273
4617	4575.24915	10.46544	9318.61474	451.13009	-2.12967	0.02175	589.53590	0.20729
4618	4195.68496	23.77289	8454.58220	710.54947	2.53162	0.05387	765.32854	0.58456
4619	4463.98965	21.79850	7651.81051	539.92798	3.64547	0.03735	675.61254	0.27084
4620	4788.02539	15.70502	7016.80067	423.69358	4.57423	0.01568	624.24621	0.19488
4621	3377.64090	20.21272	9934.26456	135.52863	5.02831	0.01808	94.11135	1.11065
4622	3119.34588	19.30850	10308.49365	454.95919	2.86930	0.17683	310.19409	1.65216
4623	4145.58305	16.43409	8938.51744	757.38969	-0.05876	0.02052	833.87883	0.38345
4624	2912.89146	20.07427	7962.84156	498.50175	5.61463	0.27432	343.76624	1.11413
4625	3752.24364	12.35848	6475.85667	396.80664	-0.83442	0.01425	451.05299	0.41577
4626	3196.16257	16.75822	7015.22897	351.06271	1.34018	0.12427	309.82668	0.63762
4627	3393.23376	11.74174	7563.90950	584.15794	3.03244	0.09194	505.98484	0.73498
4628	4890.40021	9.34840	10045.85377	362.80734	-1.27935	0.02242	458.24306	0.41766
4629	4080.29025	21.81710	8913.33680	845.06343	2.75880	0.03845	871.32729	0.50980
4630	4374.38417	20.37091	9971.81930	587.35896	2.46910	0.03857	665.09486	0.44189
4631	4184.80287	23.78522	8395.68891	747.44393	2.25389	0.06530	773.68504	0.55514
4632	4410.74822	22.74387	8359.30948	724.60502	3.14837	0.01488	921.28795	0.29377
4633	3431.83350	19.49591	19342.27662	380.06552	1.21494	0.11374	323.04516	0.74958
4634	3736.09272	11.51909	8790.34783	582.12165	-0.63113	0.03089	578.33246	0.52457
4635	4410.89598	17.87229	7005.73963	650.96747	2.67363	0.04197	691.64179	0.42302
4636	4536.92548	15.86809	11208.55697	428.63478	5.36331	0.08728	600.04109	0.32866
4637	4853.11821	13.69110	11904.78776	400.76179	2.72192	0.03490	507.25134	0.49258
4638	3334.96830	24.25979	11581.22424	541.57409	3.58370	0.06526	441.82914	0.65734
4639	4442.33868	21.73468	7906.83906	588.56910	2.99354	0.03005	742.93188	0.31315
4640	4481.46941	22.21422	7200.51686	563.99942	5.19258	0.13940	691.44741	0.75483
4641	3577.85779	16.76814	18355.66556	398.76465	0.73080	0.08902	354.97339	0.71951
4642	2980.23409	26.42002	12791.25701	481.28809	5.64575	0.11342	232.57660	1.65623
4643	4147.85088	25.39812	7081.41337	53.99617	2.37809	0.00153	14.50731	2.07470
4644	2484.06211	14.83966	3807.26110	451.47573	5.38504	0.36689	517.05916	1.06760
4645	4878.13593	16.85964	8588.48017	274.43538	4.11870	0.05638	331.68649	0.40598
4646	4041.84109	25.72765	8871.18538	904.69867	3.66565	0.01512	912.36621	0.43876
4647	3621.02354	23.26147	5147.41839	435.33351	7.80891	0.07774	417.32145	0.46417
4648	4523.02092	20.91480	11811.64559	596.77168	4.15963	0.01503	728.84527	0.27803
4649	4604.57763	20.65289	21019.51994	407.04452	5.73603	0.07870	523.63190	0.48561
4650	3627.53557	23.26882	5155.28062	565.13510	7.86133	0.08531	574.78414	0.44917
4651	4041.15647	9.17306	11797.35080	254.17656	-1.40493	0.00564	357.78087	0.11572
4652	3373.56559	20.27954	10407.26358	159.17135	4.75934	0.01983	143.39686	1.10202
4653	3735.54305	11.58197	8714.65144	520.31066	1.63972	0.02709	514.76073	0.60387
4654	4337.36246	19.38995	6379.05037	718.05671	2.38817	0.04966	792.85227	0.40648
4655	3905.54348	9.52440	14716.34033	156.09028	-1.67022	0.00254	168.59301	0.95270
4656	3218.48535	14.54774	10035.20211	414.27049	2.77345	0.09632	447.80643	0.42076
4657	4514.04544	19.82433	7356.54104	595.30371	1.55944	0.04677	724.65338	0.46275
4658	4662.23347	16.45172	16551.32190	383.83332	4.45628	0.09948	520.25027	0.43422
4659	4916.59420	10.80763	8773.96657	214.43433	4.89993	0.00686	308.37303	0.09505
4660	4401.76122	6.54132	8040.32342	377.52561	-3.95119	0.00289	505.04733	0.16710
4661	4692.77630	18.39914	16690.78617	400.21142	3.19635	0.02919	544.38711	0.17810
4662	4760.17384	18.31514	10565.61179	658.20140	3.29637	0.04858	848.36391	0.31731
4663	3261.26629	18.13906	9839.70013	418.40729	1.74106	0.12883	351.34619	0.88713
4664	4460.18546	20.97985	9276.64268	515.00557	4.20750	0.04857	660.49721	0.37023
4665	2918.25492	19.93195	8261.72662	542.66604	4.84086	0.27416	396.86416	1.06409
4666	4709.98954	11.08053	15911.46269	90.66267	1.72693	0.00464	80.28071	0.26777
4667	4876.64209	16.86604	8565.32755	363.37386	4.11972	0.06814	454.29870	0.36773
4668	4671.83958	18.85014	12273.15675	512.88343	3.93821	0.04810	636.87207	0.38857
4669	4406.40575	22.70899	8362.33488	733.71837	3.85582	0.01771	931.65959	0.29563
4670	4974.61524	10.27963	8953.01539	285.52241	0.98304	0.00474	425.55665	0.12042
4671	4920.36919	10.84992	8925.34854	129.95170	2.30634	0.00490	162.41580	0.14548
4672	5082.73146	13.27464	10115.10975	91.75112	-0.80393	0.00109	98.69604	0.38932
4673	4575.52301	7.67887	8873.56647	260.52831	-3.11498	0.00346	361.33878	0.09679
4674	4201.42896	21.00128	10527.73683	798.29901	2.55291	0.04035	858.70787	0.52290
4675	4291.34973	18.11187	6915.25557	586.80103	1.85558	0.04716	604.35671	0.53529
4676	3162.88244	24.94972	7894.13800	529.80404	5.60779	0.12625	298.16548	1.11739
4677	3867.60818	24.39866	6328.95492	1029.57654	4.67056	0.01691	948.16939	0.69284
4678	5088.53600	9.98764	14438.54315	147.64126	-0.36749	0.00225	195.46234	0.28408
4679	3735.87614	11.64833	8697.21073	622.69821	1.98301	0.03182	585.36987	0.57700
4680	5181.10154	8.71389	6759.29777	41.14910	-0.02440	0.00024	6.39250	0.62707

4681	4531.97917	20.20038	20358.46593	454.01659	5.08266	0.11420	589.60281	0.40080
4682	4816.71225	20.79408	7759.86208	503.72968	3.03198	0.05146	612.36939	0.43742
4683	4423.35199	11.42886	8380.09359	587.79707	-2.53001	0.01059	722.29978	0.28637
4684	4085.70109	18.95571	6725.66782	791.52445	3.91262	0.07691	779.68382	0.63334
4685	2927.24363	19.94771	8408.10319	580.91153	4.44654	0.28357	427.41341	1.09142
4686	4969.63268	9.92736	8505.26214	439.59485	1.32383	0.00920	631.69895	0.15155
4687	4670.70360	20.16800	9988.88165	308.34791	5.16380	0.04618	411.64644	0.29682
4688	4872.29234	16.81799	8553.69848	416.22666	3.19368	0.05884	545.11072	0.40426
4689	4092.13872	18.99082	6771.50938	577.11310	2.98858	0.06009	563.02703	0.63567
4690	4174.02129	18.99396	8217.35984	785.12462	2.19411	0.03763	830.84982	0.46260
4691	3477.01891	13.94540	7321.71760	593.15341	2.09108	0.06080	540.47986	0.59899
4692	4928.02839	7.60688	9084.59729	376.25444	-3.64878	0.00052	563.27757	0.03126
4693	4878.01006	16.85761	8606.73735	423.53699	3.04805	0.05726	554.08470	0.41489
4694	5024.72727	18.12668	10122.91564	338.17617	0.88801	0.01557	479.94724	0.24805
4695	4918.01521	10.73575	8901.94812	149.84930	1.65885	0.00535	205.48692	0.12396
4696	3303.56317	14.64111	11449.00044	430.88080	1.18079	0.06099	452.86286	0.60637
4697	4080.00442	21.84039	8927.69959	690.73831	2.80068	0.03006	661.03217	0.49542
4698	4889.35041	9.42957	12737.63439	406.23994	1.89559	0.01954	605.92502	0.27090
4699	3365.10303	24.32049	11012.85531	1002.04253	8.30981	0.14102	586.27398	1.95551
4700	4679.04790	21.50346	9108.40427	632.25942	4.03708	0.05765	775.56489	0.53262
4701	4711.14702	15.81057	11094.06082	455.13630	3.69939	0.05783	596.12051	0.30192
4702	4425.86734	11.53203	8401.60926	477.42496	-0.99393	0.01224	551.00919	0.23857
4703	4606.33562	22.28312	8305.40511	639.31722	1.59922	0.03996	788.96895	0.40314
4704	5019.21832	13.77511	8480.81759	239.38616	1.90548	0.01786	333.92160	0.16671
4705	4446.26617	20.42182	16185.53875	710.54067	3.29979	0.01573	874.75743	0.23802
4706	4497.51138	21.26245	8789.31816	639.52119	5.70417	0.09879	735.92918	0.60744
4707	4935.40859	7.67292	8984.77341	359.55339	-0.29544	0.00054	526.64725	0.03876
4708	4679.79321	24.51857	8689.92556	502.78437	4.45787	0.05984	587.71313	0.98666
4709	4439.74946	20.40001	8210.37165	590.85999	6.00163	0.10412	654.43550	0.47735
4710	4845.73628	13.56253	12121.46205	534.93171	1.10485	0.03441	681.87234	0.44207
4711	3538.41569	9.33187	7473.77211	541.09504	2.06939	0.04366	478.29350	0.69581
4712	4975.39065	10.32925	8722.69903	321.19594	4.34683	0.00483	480.36309	0.12897
4713	4792.46626	15.77491	7306.66582	366.64178	3.71025	0.01491	548.08234	0.21983
4714	4710.14326	15.79222	11056.98439	424.23872	4.99275	0.05407	549.31473	0.31804
4715	4290.59269	17.67371	7528.29793	758.47111	3.30445	0.04916	826.47470	0.42882
4716	4152.10126	12.86374	12627.91787	204.55513	-0.68931	0.00550	252.26436	0.11811
4717	4768.79761	18.39189	10682.50855	636.59910	1.96874	0.03480	805.01756	0.37682
4718	4816.76995	20.82296	7746.09763	673.92343	3.46428	0.04916	825.72743	0.39739
4719	3582.89412	13.21239	5375.56356	479.40449	0.57523	0.04099	433.42586	0.56956
4720	3634.91212	12.64101	22454.18571	244.91289	-0.01113	0.02171	245.74305	0.47541
4721	4338.28910	18.67026	7805.36493	441.02823	5.85905	0.11150	526.37173	0.49048
4722	4617.33158	21.71611	15585.05549	353.87668	5.04329	0.06107	382.81030	0.52812
4723	4463.18620	20.98529	9405.54176	453.72261	2.39190	0.04221	584.45337	0.36047
4724	4457.70974	19.58390	5692.59116	620.39887	3.02830	0.04001	698.89135	0.38718
4725	4423.51083	11.43437	8406.70547	540.32826	-2.24574	0.01096	663.10939	0.28442
4726	5077.08835	13.17446	12162.03634	107.42579	-0.69063	0.00120	126.67992	0.35416
4727	3735.50258	11.60078	8710.22990	607.60684	1.20822	0.03161	623.30838	0.57779
4728	4780.03550	10.42159	11759.54952	493.99132	-0.91339	0.00854	678.79766	0.11301
4729	4782.94664	16.52565	9809.76838	546.92834	0.37505	0.02927	714.12900	0.37173
4730	4576.32442	10.37258	9312.23621	550.15630	-2.34720	0.02443	679.75609	0.17887
4731	2493.71782	14.42428	3692.33542	462.16381	5.84296	0.31734	416.62371	0.31404
4732	3832.96829	15.80444	8628.77647	633.12194	1.88677	0.03541	632.72984	0.54867
4733	3833.16429	15.79554	8628.75422	794.03694	2.04818	0.03154	766.43401	0.56375
4734	4896.55918	9.54703	10016.73663	612.31446	-0.77909	0.02283	800.00966	0.37602
4735	4739.34149	21.73877	10167.96033	573.22092	2.93779	0.06613	729.19948	0.49053
4736	4845.80385	12.74461	12993.88533	433.99946	2.85224	0.02543	621.31044	0.30747
4737	3485.04444	18.86107	18788.43127	470.33814	0.11471	0.05169	432.66569	1.70028
4738	4450.76913	20.10622	13460.24580	461.05407	5.09622	0.10489	553.15917	0.31940
4739	5016.21024	10.04317	9387.75302	263.05649	0.35242	0.00499	0.00000	0.16679
4740	4864.90856	11.74572	9959.77587	66.33619	-0.89325	0.00483	0.00000	0.08840
4741	5003.99296	7.06633	16474.32787	139.56124	-2.65970	0.00155	0.00000	0.03243
4742	4940.97868	9.98988	16179.73449	107.92025	-1.08028	0.00190	0.00000	0.07212
4743	4900.22449	10.92117	8391.40912	139.11986	0.50369	0.00542	0.00000	0.09920
4744	4990.56927	11.95453	13775.85547	56.22720	-2.97916	0.00114	0.00000	0.03538
4745	4644.55028	13.94826	14112.81694	75.08199	0.79918	0.00594	0.00000	0.05483
4746	4550.73468	17.75568	8422.41036	539.11066	1.77232	0.02651	0.00000	0.30956
4747	4628.41957	22.27102	9826.30095	711.57702	2.04163	0.03837	0.00000	0.38704
4748	4367.43507	18.79714	9614.98320	549.04908	2.58276	0.04200	0.00000	0.35148
4749	4704.32094	19.16168	9751.63619	646.97351	0.57566	0.04367	0.00000	0.29523
4750	4338.46213	17.13183	8211.50214	613.71043	2.56697	0.03887	0.00000	0.34619
4751	4381.01591	18.72668	8624.65172	636.65862	1.51818	0.03753	0.00000	0.38979

4752	4374.46500	20.36531	9975.05195	632.77345	2.06098	0.03846	0.00000	0.43573
4753	4513.96520	19.81885	7359.35142	667.46624	1.37213	0.04752	0.00000	0.46477
4754	4462.70523	21.00153	9420.57731	667.94344	2.24764	0.04598	0.00000	0.37888
4755	4246.33019	19.01003	7262.32361	545.28957	3.10537	0.04354	0.00000	0.44759
4756	4441.14242	21.73248	7905.58252	511.18035	2.34884	0.02985	0.00000	0.31178
4757	4497.42090	21.28824	8797.94266	534.94409	4.93088	0.08108	0.00000	0.63023
4758	4846.70106	13.59425	12153.70543	448.43904	1.27429	0.03501	0.00000	0.45910
4759	4785.69142	22.27156	10659.40792	447.10152	3.29575	0.04846	0.00000	0.50038
4760	4679.00544	21.50692	9124.84917	506.44016	3.28403	0.05184	0.00000	0.52631
4761	4820.79704	20.94298	7792.93135	612.59294	3.08698	0.04221	0.00000	0.42442
4762	4899.34385	16.87356	8796.64166	419.63755	2.47683	0.04464	0.00000	0.43319
4763	4605.69106	22.19392	10982.98572	439.68761	4.67434	0.07087	0.00000	0.57902
4764	4492.38941	20.51852	16577.42821	822.06488	2.62789	0.01255	0.00000	0.27246
4765	4410.41332	22.72610	8340.30354	752.42000	2.93996	0.01458	0.00000	0.30668
4766	4236.53785	23.40914	13332.46656	891.93291	3.19165	0.00921	0.00000	0.14777
4767	4803.62288	22.29385	11472.12695	738.02820	2.59528	0.01389	0.00000	0.27971
4768	4553.01835	22.52659	12869.62973	656.50754	4.59290	0.02457	0.00000	0.37432
4769	4544.22416	20.94909	15732.25328	778.07733	3.11293	0.01141	0.00000	0.24484
4770	3863.37651	24.03528	12296.08841	893.40053	5.47425	0.01663	0.00000	0.07085
4771	4958.35520	6.64027	10680.85577	359.94711	-3.51757	0.00626	0.00000	0.19624
4772	4782.34160	16.50899	9774.13981	498.99610	0.21409	0.02976	0.00000	0.34947
4773	4878.74341	7.75031	10005.16780	383.80520	-0.64451	0.00824	0.00000	0.23516
4774	4759.01805	18.18751	10723.79686	565.59041	1.38079	0.03332	0.00000	0.38149
4775	4969.16606	17.23865	8727.64904	685.98638	0.72162	0.01844	0.00000	0.28810
4776	4890.15097	9.34199	10188.40822	438.05565	-1.22714	0.02336	0.00000	0.42019
4777	4790.04057	10.23943	11155.43039	505.62662	0.17248	0.02592	0.00000	0.38844
4778	4982.70080	9.91221	9062.26384	348.46745	-0.17697	0.00758	0.00000	0.16117
4779	5005.40145	6.50742	11259.57831	233.95518	-3.88280	0.00100	0.00000	0.02846
4780	4606.02826	22.28712	8296.85840	590.14888	2.13849	0.04070	0.00000	0.41497
4781	5045.89425	13.51289	8885.88606	350.81982	1.00457	0.01360	0.00000	0.20314
4782	4749.12613	14.79349	9638.75788	464.61772	2.73455	0.05741	0.00000	0.57340
4783	4770.22188	14.71859	12371.36240	448.40782	2.31963	0.01978	0.00000	0.38129
4784	4844.40210	15.28635	9726.66220	388.69896	2.13528	0.02464	0.00000	0.30723
4785	4885.63383	9.31552	12446.68425	468.40733	1.28838	0.01620	0.00000	0.27727
4786	4784.34673	15.47756	7030.55138	351.63799	2.30726	0.01376	0.00000	0.21589
4787	4748.32527	16.00145	21029.76320	421.03556	3.10172	0.05438	0.00000	0.64586
4788	4847.16556	13.30771	10866.83996	432.43357	2.01185	0.02303	0.00000	0.29032
4789	4637.15331	16.97324	10128.47185	457.75211	3.83825	0.06237	0.00000	0.52155
4790	4920.66871	19.94650	11495.57945	465.30654	2.18703	0.05304	0.00000	0.39705
4791	4899.32290	13.48881	8167.76237	391.82952	1.55560	0.01634	0.00000	0.23966
4792	4709.21575	19.22877	12646.93613	417.22128	3.81198	0.08071	0.00000	0.57421
4793	4940.49678	13.04077	9349.51167	321.07591	1.34743	0.00951	0.00000	0.17661
4794	4737.60962	15.91411	12178.07522	488.41238	3.08799	0.04680	0.00000	0.43364
4795	4419.08179	16.94150	10238.48840	511.80659	4.76054	0.07036	0.00000	0.59346
4796	5024.02629	18.11664	10151.20293	447.51771	1.61259	0.01559	0.00000	0.25392
4797	4686.74720	13.54553	9625.80855	460.67479	1.91948	0.02010	0.00000	0.23543
4798	4963.66441	9.90714	8538.95868	231.14552	0.63323	0.00441	0.00000	0.18918
4799	4843.63970	12.55898	13097.16879	453.65014	2.86523	0.02239	0.00000	0.32259
4800	4708.04537	17.92901	16236.60158	479.75052	3.01099	0.02468	0.00000	0.21008
4801	4451.84928	19.83511	7999.61500	449.35297	5.41188	0.08025	0.00000	0.60237
4802	4744.87321	21.53499	19959.19560	639.67585	4.10969	0.03460	0.00000	0.36994
4803	4911.67715	12.72757	7830.23723	432.90510	2.43924	0.03724	0.00000	0.31946
4804	4615.58019	18.64865	8327.01160	528.13147	4.11778	0.03307	0.00000	0.37155
4805	4642.37126	20.11082	9499.72689	438.62491	3.82625	0.04443	0.00000	0.32970
4806	4688.85449	21.36641	17831.52020	522.61287	4.65388	0.06959	0.00000	0.60552
4807	4604.62169	20.65763	22452.27649	475.52018	4.99511	0.07943	0.00000	0.50491
4808	4708.25576	15.77146	11409.12097	528.74166	4.31349	0.05000	0.00000	0.40105
4809	4675.06202	18.89039	12412.32605	591.72290	4.56430	0.04271	0.00000	0.38616
4810	4617.40053	21.71509	15573.16805	489.93610	4.83368	0.06033	0.00000	0.53547
4811	3788.78127	10.44758	21349.16544	63.62449	0.41597	0.00284	0.00000	0.29491
4812	3852.59514	24.77134	9888.25578	24.54670	3.27634	0.00953	0.00000	0.54950
4813	3825.28883	24.69801	9880.90346	22.16111	3.60039	0.01047	0.00000	0.64851
4814	3978.92051	20.14649	8902.20783	33.71955	1.64385	0.00816	0.00000	0.47338
4815	3457.74875	26.58061	24821.89340	28.61445	4.13820	0.00968	0.00000	1.05959
4816	4044.80962	22.75002	12658.75457	43.44625	0.48634	0.00164	0.00000	0.24990
4817	3824.77827	24.88699	14195.59824	39.47586	2.75108	0.00844	0.00000	0.37550
4818	4050.63244	23.81393	18403.52402	38.20737	1.00322	0.01619	0.00000	0.57869
4819	3405.69775	25.94402	14315.17746	52.24553	5.34929	0.04644	0.00000	1.10389
4820	3959.61555	20.04819	8889.00521	49.95954	0.75043	0.00845	0.00000	0.48175
4821	3459.81823	26.58378	24821.31054	40.41993	3.18316	0.00981	0.00000	1.07045
4822	4034.74726	22.70408	12658.76627	73.57945	-0.25483	0.00169	0.00000	0.24268

4823	3813.51815	24.96279	14182.04558	41.77939	1.73926	0.00868	0.00000	0.38127
4824	4029.34973	23.81267	18512.67165	72.28069	0.23617	0.01684	0.00000	0.58919
4825	3405.61409	25.94325	14315.43964	51.85344	4.32482	0.04724	0.00000	1.11469
4826	3960.83926	19.94881	8852.54692	50.63901	0.80554	0.00841	0.00000	0.49114
4827	3481.67132	26.62238	24822.55669	49.08086	3.19833	0.00963	0.00000	1.09682
4828	4013.31867	22.64017	12629.01011	56.76243	-0.17874	0.00177	0.00000	0.24790
4829	3793.74749	25.08690	14170.34650	72.50262	1.81233	0.00899	0.00000	0.38403
4830	4011.85666	23.78029	18576.80006	50.43568	0.37004	0.01745	0.00000	0.59399
4831	3405.52014	25.94181	14315.97481	84.47058	3.90518	0.04803	0.00000	1.12396
4832	3956.50359	19.88672	8842.46633	71.29141	1.23058	0.00722	0.00000	0.50120
4833	3491.34480	26.60474	24817.05836	68.53953	3.46652	0.00771	0.00000	1.11554
4834	3984.49150	22.58652	13239.92194	67.11125	0.24606	0.00187	0.00000	0.26650
4835	3765.77810	25.19249	14193.07366	74.56878	2.58736	0.00808	0.00000	0.39754
4836	3988.72708	23.77095	18704.70242	77.06120	0.76920	0.01773	0.00000	0.60795
4837	3402.84992	25.93306	14310.57766	81.08850	4.92721	0.04635	0.00000	1.13810
4838	3952.58044	19.83791	8825.31293	36.15291	1.37858	0.00737	0.00000	0.50439
4839	3505.94137	26.56075	24776.00050	33.44589	3.63083	0.00767	0.00000	1.13832
4840	3962.08294	22.56028	13181.01534	34.57745	0.46839	0.00196	0.00000	0.27466
4841	3754.66148	25.22629	14215.01848	30.22114	2.85332	0.00830	0.00000	0.39508
4842	3955.90096	23.74629	18856.73659	34.05954	1.05059	0.01861	0.00000	0.62660
4843	3402.08543	25.93469	14313.44066	27.32229	5.30045	0.04717	0.00000	1.14265
4844	3947.07995	19.97153	8937.35738	60.58989	0.52991	0.00748	0.00000	0.50143
4845	3498.78253	26.55773	24758.11864	51.50079	2.71106	0.00783	0.00000	1.14569
4846	3938.27452	22.69239	12875.65033	65.04681	-0.15946	0.00209	0.00000	0.28594
4847	3760.74474	25.18670	14224.24375	43.76294	1.78643	0.00839	0.00000	0.40265
4848	3941.10581	23.75892	18542.42147	73.13872	0.33016	0.01878	0.00000	0.62121
4849	3403.26852	25.92946	14304.32274	54.91960	4.17174	0.04793	0.00000	1.15112
4850	3947.68030	19.85518	8813.86561	66.07958	1.10468	0.00776	0.00000	0.51726
4851	3498.17814	26.53706	24778.07463	61.46671	3.13861	0.00801	0.00000	1.16813
4852	3904.24260	22.68628	12700.92598	75.87383	0.58134	0.00217	0.00000	0.30535
4853	3739.27014	25.19865	14250.40041	90.67660	2.29451	0.00872	0.00000	0.41810
4854	3916.21384	23.67977	18926.71660	74.34244	0.99111	0.02005	0.00000	0.65568
4855	3400.21322	25.93078	14320.44017	114.91253	4.42123	0.04892	0.00000	1.16103
4856	3939.31496	19.80257	8817.00221	28.73896	1.19491	0.00789	0.00000	0.52671
4857	3497.09949	26.53113	24789.03354	22.18559	3.61204	0.00808	0.00000	1.18416
4858	3844.70423	22.26955	12753.85422	48.32080	0.71763	0.00238	0.00000	0.33555
4859	3730.13863	25.17711	14283.09456	17.97087	3.03355	0.00886	0.00000	0.42849
4860	3891.70150	23.57646	18965.69392	39.21349	1.03456	0.02073	0.00000	0.67562
4861	3400.37034	25.92259	14296.99056	26.79564	5.46704	0.04937	0.00000	1.19159
4862	3930.76374	19.73946	8829.18171	27.08215	2.32020	0.01095	0.00000	0.53319
4863	3503.95112	26.51830	24823.80882	25.87277	4.48385	0.00941	0.00000	1.19686
4864	3808.41178	22.03166	12482.25067	37.58169	2.22826	0.00291	0.00000	0.33983
4865	3715.41940	25.20663	14261.10624	49.93704	3.85404	0.00762	0.00000	0.44513
4866	3866.02525	23.47529	19063.36505	27.43226	2.41164	0.02120	0.00000	0.69616
4867	3402.36016	25.92275	14303.62822	68.47201	6.06577	0.05475	0.00000	1.15959
4868	3917.00065	19.57789	8877.66196	41.23279	2.50569	0.01125	0.00000	0.53473
4869	3503.96135	26.50425	24859.17268	35.92213	4.56976	0.00945	0.00000	1.14963
4870	3766.97471	21.73547	12546.03562	44.57714	2.41012	0.00309	0.00000	0.30109
4871	3708.98084	25.09320	14306.37250	36.76889	3.82370	0.00776	0.00000	0.40138
4872	3827.87110	23.22626	19183.84755	43.01406	2.67146	0.02221	0.00000	0.70681
4873	3397.97479	25.90086	14307.27354	43.56024	5.70185	0.05589	0.00000	1.13898
4874	3898.98514	19.65781	9060.31652	42.12304	2.04479	0.01271	0.00000	0.48425
4875	3500.61968	26.52075	24769.83047	31.79592	4.11159	0.01123	0.00000	1.15068
4876	3737.85479	21.63562	12702.50804	57.35475	1.75991	0.00356	0.00000	0.30102
4877	3696.71358	25.03441	14330.41047	32.17617	3.55696	0.00857	0.00000	0.40351
4878	3805.55552	23.15078	18652.67236	50.40268	2.10756	0.02520	0.00000	0.69206
4879	3402.93398	25.88362	14377.71550	31.28761	5.50710	0.05909	0.00000	1.09496
4880	4082.96967	18.28357	9063.18961	40.52989	-2.82720	0.00460	0.00000	0.41123
4881	3477.84580	26.47308	24780.39485	33.03333	4.13676	0.00642	0.00000	1.13117
4882	3821.27881	20.73553	12725.01077	43.66497	-4.02745	0.00196	0.00000	0.24920
4883	3721.07210	24.82420	14337.89345	49.55165	1.85870	0.00826	0.00000	0.38231
4884	4142.72434	19.66844	18662.24625	47.08515	-1.71248	0.01602	0.00000	0.55329
4885	3401.89478	25.86750	14387.04431	74.00227	5.09778	0.04191	0.00000	1.08805
4886	3890.96327	19.56865	9061.73135	91.59705	2.04761	0.00503	0.00000	0.49834
4887	3479.35976	26.52646	24791.52008	83.83750	4.16193	0.00616	0.00000	1.17360
4888	3715.24491	21.79616	12760.43545	99.23969	2.22335	0.00223	0.00000	0.31496
4889	3681.87404	25.07996	14359.50474	76.37401	3.43837	0.00823	0.00000	0.41904
4890	3797.37477	23.09877	18660.01636	102.50874	2.31481	0.02291	0.00000	0.71231
4891	3397.49246	25.88383	14403.73397	92.20627	5.40208	0.04337	0.00000	1.11266
4892	3891.06720	19.57734	9056.70473	66.25444	2.29306	0.00490	0.00000	0.51378
4893	3475.30886	26.52895	24804.71587	68.39702	4.33074	0.00604	0.00000	1.18698

4894	3714.02457	21.84493	12551.67307	68.47461	2.47311	0.00214	0.00000	0.32697
4895	3681.23499	25.05700	14366.09699	72.24661	3.42435	0.00813	0.00000	0.42204
4896	3795.86736	23.07134	18454.83283	64.09842	2.60561	0.02232	0.00000	0.72438
4897	3395.79566	25.87407	14408.34600	67.97748	5.17418	0.04236	0.00000	1.13112
4898	3895.07527	19.62579	9057.99743	39.25660	3.69640	0.00512	0.00000	0.52647
4899	3464.21872	26.53792	24806.97732	37.64887	5.68599	0.00612	0.00000	1.19890
4900	3713.55160	21.85438	12550.60993	43.50683	3.79432	0.00234	0.00000	0.33857
4901	3684.55799	24.94835	14390.75592	46.28448	4.71866	0.00846	0.00000	0.43297
4902	3794.57008	23.05464	18461.20544	39.96978	3.92668	0.02269	0.00000	0.73970
4903	3392.96143	25.87398	14422.25650	89.90172	5.81964	0.04671	0.00000	1.09532
4904	3889.72393	19.59123	9048.92188	79.36480	2.03873	0.00474	0.00000	0.54213
4905	3464.23756	26.53577	24820.03727	85.10264	4.17501	0.00631	0.00000	1.20286
4906	3710.72400	21.79473	12551.88522	80.38163	2.04022	0.00221	0.00000	0.35051
4907	3684.70297	24.91425	14403.38124	98.84116	3.24714	0.00926	0.00000	0.44173
4908	3787.30302	23.00340	18489.91851	75.52731	2.24022	0.02170	0.00000	0.76527
4909	3391.18822	25.85684	14425.79019	99.96687	4.98800	0.04427	0.00000	1.12026
4910	3886.86799	19.55672	9048.24852	53.27092	2.64890	0.00539	0.00000	0.52997
4911	3461.13964	26.52898	24815.86927	44.90449	4.69040	0.00680	0.00000	1.16909
4912	3712.92952	21.78982	12538.38889	58.54649	2.57337	0.00240	0.00000	0.36136
4913	3690.41050	24.84215	14427.03689	51.79252	3.78654	0.00658	0.00000	0.44209
4914	3789.76934	22.97971	18501.01792	58.12192	2.81421	0.02364	0.00000	0.78441
4915	3390.60691	25.84880	14426.47659	51.91721	5.51724	0.04774	0.00000	1.11615
4916	3876.09369	19.50515	9051.06350	39.73588	3.62004	0.00499	0.00000	0.49404
4917	3447.98828	26.55901	24805.94082	34.47006	5.63932	0.00678	0.00000	1.13528
4918	3713.02983	21.79618	12537.24995	73.30362	3.63396	0.00223	0.00000	0.36901
4919	3694.57882	24.84318	14431.30893	33.75616	4.56318	0.00697	0.00000	0.42510
4920	3792.70849	22.99664	18477.58943	55.81173	3.75228	0.02311	0.00000	0.79712
4921	3393.35724	25.84738	14410.98654	49.33135	5.87286	0.04498	0.00000	1.11569
4922	3878.68538	19.53423	9056.26113	49.26828	3.25274	0.00617	0.00000	0.48238
4923	3446.50880	26.56561	24800.94046	42.22477	5.22084	0.00761	0.00000	1.14517
4924	3713.49793	21.86035	12549.33436	52.65802	3.27310	0.00245	0.00000	0.37680
4925	3695.02284	24.85791	14424.96461	47.06528	4.06901	0.00625	0.00000	0.41867
4926	3800.67296	23.05201	18432.22018	52.05942	3.36422	0.02345	0.00000	0.80537
4927	3395.75647	25.84745	14400.55906	68.71607	5.17577	0.04911	0.00000	1.13994
4928	3885.30158	19.63278	9058.95523	29.58306	3.02455	0.00639	0.00000	0.48992
4929	3444.70520	26.58030	24788.60300	27.65367	5.22674	0.00728	0.00000	1.14946
4930	3732.87109	22.11624	12526.14699	45.57390	2.97020	0.00170	0.00000	0.36278
4931	3701.59290	24.96835	14388.20080	17.00601	3.99342	0.00557	0.00000	0.42588
4932	3818.44599	23.21688	18370.48163	35.82298	3.15817	0.02349	0.00000	0.80783
4933	3402.82378	25.87153	14382.10532	28.03656	5.52681	0.05068	0.00000	1.15763
4934	3885.55030	19.62400	9057.43667	73.55508	2.97343	0.00554	0.00000	0.48892
4935	3447.25107	26.57105	24788.57086	69.31689	5.12054	0.00642	0.00000	1.15810
4936	3733.83238	22.10214	12522.66212	75.16255	2.87247	0.00140	0.00000	0.37148
4937	3700.57558	24.98463	14394.70849	105.20444	4.11894	0.00569	0.00000	0.43643
4938	3816.27885	23.21968	18406.07573	70.19292	3.06401	0.02075	0.00000	0.81813
4939	3403.06742	25.87400	14380.37934	136.85680	5.97077	0.04592	0.00000	1.16073
4940	3885.64009	19.62795	9062.31476	29.86785	2.64734	0.00640	0.00000	0.49553
4941	3450.12815	26.55813	24780.78738	22.06118	4.74027	0.00599	0.00000	1.15221
4942	3731.63607	22.10904	12532.11477	52.17406	2.41045	0.00148	0.00000	0.40421
4943	3698.85739	25.02352	14392.08645	34.41296	3.97764	0.00483	0.00000	0.44748
4944	3814.51997	23.21740	18416.05773	38.54247	2.64709	0.02172	0.00000	0.82508
4945	3405.74765	25.88331	14370.43493	51.91678	5.92489	0.04431	0.00000	1.15329
4946	3883.17522	19.59256	9063.51925	73.04485	2.06956	0.00680	0.00000	0.49850
4947	3464.69701	26.50021	24739.40182	73.76030	4.02861	0.00651	0.00000	1.14884
4948	3713.28727	22.02245	12568.50074	75.76579	2.14046	0.00162	0.00000	0.43503
4949	3689.99623	25.08516	14378.90878	68.53240	3.22187	0.00467	0.00000	0.45345
4950	3804.62633	23.15218	18448.40136	74.41760	2.22580	0.02204	0.00000	0.75966
4951	3407.23207	25.88418	14364.23639	85.00631	4.95547	0.04657	0.00000	1.15740
4952	3885.14785	19.59435	9064.79189	69.51503	3.67087	0.00646	0.00000	0.49149
4953	3466.98529	26.48319	24733.78364	60.94211	5.71575	0.00562	0.00000	1.10051
4954	3693.54356	22.02925	12579.65381	85.90287	3.89417	0.00148	0.00000	0.45276
4955	3681.91615	25.14180	14341.01898	84.03167	4.67919	0.00473	0.00000	0.43319
4956	3808.69599	23.07933	18407.00649	79.84258	3.82438	0.02435	0.00000	0.70177
4957	3407.41806	25.88408	14363.31423	92.38672	5.76546	0.04654	0.00000	1.13315
4958	3884.42449	19.59040	9060.98985	38.36664	2.32746	0.00838	0.00000	0.48804
4959	3466.78602	26.47989	24732.18435	33.99221	4.29151	0.00760	0.00000	1.09379
4960	3689.81414	22.02799	12593.45888	61.30399	2.52037	0.00201	0.00000	0.46185
4961	3678.36435	25.14998	14312.52522	52.29471	3.52994	0.00537	0.00000	0.43834
4962	3808.39829	23.06441	18417.53572	49.94551	2.50631	0.02910	0.00000	0.70670
4963	3407.10611	25.88379	14361.74372	74.57955	5.73607	0.04043	0.00000	1.12351
4964	3886.85180	19.61671	9061.44587	63.53706	3.08213	0.00972	0.00000	0.48678

4965	3464.02812	26.48485	24740.10400	57.05136	5.18940	0.00821	0.00000	1.08490
4966	3689.86112	22.04360	12613.13831	70.35473	3.25849	0.00239	0.00000	0.48055
4967	3680.94370	25.15780	14298.52143	60.50959	4.29397	0.00483	0.00000	0.43896
4968	3813.53565	23.07359	18389.54919	64.21563	3.20961	0.03557	0.00000	0.70924
4969	3406.87297	25.88337	14351.85340	73.00078	6.22668	0.06162	0.00000	1.15020
4970	3884.91049	19.66927	9065.96483	83.91284	4.60506	0.00882	0.00000	0.49746
4971	3454.74495	26.54112	24738.79536	68.57538	6.49371	0.00739	0.00000	1.08405
4972	3695.92159	22.11679	12620.34655	117.57277	4.73139	0.00210	0.00000	0.48541
4973	3686.81679	25.16102	14290.34080	69.46217	5.50765	0.00493	0.00000	0.43672
4974	3816.54177	23.10352	18398.27270	115.80014	4.68313	0.03490	0.00000	0.71370
4975	3407.45692	25.88582	14347.80879	92.86582	6.49748	0.05850	0.00000	1.11962
4976	3883.54935	19.66902	9061.79744	81.95338	3.92439	0.00864	0.00000	0.45355
4977	3454.43951	26.55140	24759.15443	82.07305	5.79114	0.00716	0.00000	1.03394
4978	3694.54895	22.11889	12589.88574	57.06055	4.08302	0.00206	0.00000	0.48152
4979	3685.23567	25.17838	14297.71356	104.93972	4.74822	0.00497	0.00000	0.41938
4980	3811.49760	23.09764	18428.98797	66.33432	4.02933	0.03560	0.00000	0.59038
4981	3407.67787	25.88494	14285.15865	94.04428	5.66703	0.05869	0.00000	0.97657
4982	3876.99403	19.65227	9047.52796	75.82644	3.85706	0.00946	0.00000	0.48307
4983	3453.25872	26.55488	24762.79599	71.70610	5.67573	0.00779	0.00000	1.03918
4984	3691.45763	22.08803	12589.55002	72.64921	3.97567	0.00215	0.00000	0.45396
4985	3681.50260	25.18174	14304.57968	94.78609	4.69030	0.00507	0.00000	0.44748
4986	3803.57579	23.06042	18482.28729	71.96241	3.95247	0.03705	0.00000	0.61497
4987	3407.26485	25.87941	14283.12411	79.16761	5.61082	0.05816	0.00000	0.98475
4988	3870.29459	19.59217	9043.62042	68.27921	4.39072	0.00939	0.00000	0.51248
4989	3457.36243	26.53531	24746.02162	60.20672	6.14465	0.00779	0.00000	1.04726
4990	3679.28796	22.02875	12582.22386	82.29422	4.47607	0.00240	0.00000	0.42690
4991	3670.80608	25.22826	14314.22366	51.07814	5.30621	0.00550	0.00000	0.47504
4992	3791.96281	23.01455	18541.75004	74.87670	4.54940	0.03797	0.00000	0.63968
4993	3407.41107	25.87756	14280.71371	53.34137	6.33552	0.06060	0.00000	0.99106
4994	3865.59447	19.58339	9048.25198	52.70691	4.79176	0.00961	0.00000	0.51950
4995	3449.34788	26.53549	24721.40940	61.71478	6.43535	0.00789	0.00000	1.01874
4996	3676.55232	22.07754	12550.36646	39.62526	4.78482	0.00241	0.00000	0.41626
4997	3780.05183	23.09368	18620.88836	41.50805	4.83950	0.03901	0.00000	0.68368
4998	3408.95846	25.87359	14275.70040	56.90699	6.32144	0.06082	0.00000	1.04908

s, and was developed as a variant of the random forest, introducing more randomness in building decision trees (Geurts et al., 2006). Instead of searching for the optimal split at each decision node, it randomly selects split points, building more trees in the process to improve prediction accuracy, and can also reduce the risk of overfitting. Compared with random forest algorithm, ET uses the whole training dataset to train each regression tree, and reduces more variance and enhances generalization ability. ET is particularly well-suited for large datasets and high-dimensional data (John et al., 2016).

The Extra-Trees Regression (ET) algorithm, innovated by Geurts et al. in 2006, is a machine-learning technique evolved from the random forest model. It injects increased randomness in decision tree construction, selecting split points randomly rather than seeking optimal splits. This method not only builds more trees, enhancing prediction accuracy, but also lowers overfitting risks. Unlike the random forest, ET utilizes the entire training dataset for each tree, thereby reducing variance and improving generalization. This makes ET exceptionally effective for large, high-dimensional datasets, a key aspect underscored by John et al. in 2016, and highly relevant in geographical research.

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