DOKUZ EYLÜL UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES

PERFORMANCE ENHANCEMENT OF A DARRIEUS TYPE VERTICAL AXIS WIND TURBINE PAIR FOR DIFFERENT PROXIMITIES AND TIP-SPEED RATIOS: AN EXPERIMENTAL ANALYSIS

by
İskender KÖKEY

October, 2023

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İskender KÖKEY

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Ph.D. THESIS EXAMINATION RESULT FORM

We have read the thesis entitled **"PERFORMANCE ENHANCEMENT OF A DARRIEUS TYPE VERTICAL AXIS WIND TURBINE PAIR FOR DIFFERENT PROXIMITIES AND TIP SPEED RATIOS: AN EXPERIMENTAL ANALYSIS"** completed by **İSKENDER KÖKEY** under supervision of **PROF.DR. ALPASLAN TURGUT** and we certify that in our opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Doctor of Philosophy.

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PERFORMANCE ENHANCEMENT OF A DARRIEUS TYPE VERTICAL AXIS WIND TURBINE PAIR FOR DIFFERENT PROXIMITIES AND TIP-SPEED RATIOS: AN EXPERIMENTAL ANALYSIS

ABSTRACT

This thesis investigates the energy interaction of a Darieus type vertical axis wind turbine (VAWT) pair through literature review and field experiments for different proximities and tip-speed ratios.

The literature review part of this thesis investigates the impact of azimuthal positioning and proximities between VAWTs on the performance coefficient of the turbines. The findings are illustrated by using a color-coded map that depicts the enhancement in performance coefficient for different proximities up to 4D. In addition to the results, a *baseball-shaped analogy* is employed to explain the generalized behavior of VAWTs working in pair.

In order to carry out field experiments, two units of VAWT were manufactured, and performance interactions were observed for different proximities and TSRs at the near-shore experiment site. The results indicate the power performance enhancement by percentages of 125 and 75 for 4D and 1.5D proximities, respectively, at a tip speed ratio (TSR) of 2.4. The uncertainty of the study was assessed by the uncertainty analysis performed, and it was shown that the uncertainty did not exceed the percentage of 3 for all experimental conditions and remained below the percentage of 2 for the majority of the data set.

Keywords: Wind energy, vertical axis wind turbine, VAWT, performance enhancement, baseball shape analogy.

DARRIEUS TİPİ DÜŞEY EKSENLİ RÜZGAR TÜRBİNİ ÇİFTİNİN FARKLI YAKINLIK VE UÇ HIZI ORANLARI İÇİN PERFORMANSININ ARTIRILMASI: DENEYSEL BİR ANALİZ

ÖZ

Bu tez kapsamında, Darieus tipi düşey eksenli bir rüzgar türbini (DERT) çiftinin enerji etkileşimi literatür taraması ve saha deneyleri ile incelenerek, türbinlerin birbirlerine göre değişen mesafelerde konumlandırılmalarının türbin çiftinin performansına etkisi, farklı kanat uç hızı aralıkları için ortaya konulmuştur.

Literatür taraması kapsamında incelenen yayınların sonuçları derlenerek DERT'lerin birbirlerine göre farklı uzaklık ve açıda konumlandırılmaları durumundaki performans değişimleri görselleştirilmiştir. Türbinlerin birbirlerine göre farklı açılarda ve 4D mesafeye kadar farklı uzaklıklarda konumlandırılmalarının türbinlerin performans katsayısına etkisi, renklendirilmiş bir harita ile sunulmuş, tespit edilen performans değişimleri *beyzbol topu analojisi* kullanılarak genelleştirilmiştir.

Saha deneylerinin yürütülmesi için 2 adet prototip DERT imalatı gerçekleştirilerek bir yakın-kıyı sahasında DERT'lerin bağımsız çalışma durumu ve birbirlerine göre hakim rüzgar yönüne dik doğrultuda 1,5D ve 4D uzaklıkta konumlandırıldıkları durumlardaki performans etkileşimleri, farklı kanat uç hızı oranları için gözlenmiştir. Yürütülen deneyler sonucunda 2,4 kanat uç hızı oranı için, birbirlerine göre 4D ve 1,5D uzaklıkta konumlandırıldıkları durumda, bağımsız çalışma şartlarına göre performans kat sayılarının sırasıyla yüzde 125 ve yüzde 75 oranında arttığı ortaya konulmuştur. Ulaşılan sonuçlarının belirsizliği gerçekleştirilen belirsizlik analizi ile saptanarak tüm deney şartları için belirsizliğin yüzde 3'ü geçmediği, anlamlı veri seti için belirsizlik oranının yüzde 2'nin altında kaldığı tespit edilmiştir.

Anahtar kelimeler: Rüzgar enerjisi, düşey eksenli rüzgar türbini, DERT, enerji kazanımı, beyzbol topu analojisi.

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LIST OF SYMBOLS

Cp_p : Power Coefficient of Primary Turbine

Cp_s : Power Coefficient of Secondary Turbine

Cp_{mean} : Arithmetic Mean Power Coefficient of PT and ST

Cp_n : Normalized Power Coefficient

Cp_{sa} : Power Coefficient of Stand Alone Turbine

α : The azimuthal position of the secondary turbine with respect to the primary turbine

D : Normalized distances between the axis of the PT and ST

V : Voltage

I : Current

v : Wind Speed

dir : Wind Direction

P : Wind Power

ϱ : Air Density

A : Swept Area of Rotor

ω : Rotational Speed

r : Radius of Rotor

ABBREVIATIONS

VAWT	: Vertical Axis Wind Turbine
TSR	: Tip Speed Ratio
HAWT	: Horizontal Axis Wind Turbine
GWEC	: Global Wind Energy Council
WPP	: Wind Power Plant
PIV	: Particle Image Velocimetry
CCD	: Charge Coupled Device
LRB	: Leaky Rankine Body
CFD	: Computational Fluid Dynamics
RANS	: Reynolds Averaged Navier Stokes
PT	: Primary Turbine
ST	: Secondary Turbine
PWD	: Prevailing Wind Direction
WMS	: Wind Measurement Station
RPM	: Revolutions per Minute
GSM	: Global System for Mobile Communications
SD	: Secure Digital
IPZ	: Increased Power Zone
DPZ	: Decreased Power Zone
NZ	: Neutral Zone
UPDZ	: Up Wind Decreased Power Zone
DDPZ	: Down Wind Decreased Power Zone

CHAPTER ONE
INTRODUCTION

1.1 Motivation of the Study

Renewable energy sources have become an essential part of energy production due to the increased importance of the security of energy supply, depletion of fossil sources, and climate change. Even though wind energy, one of the most essential parts of renewable energy sources, has been developing for many decades, scientific studies were sprouted after the energy crisis in the 1970s. Regarding to GWEC Global Wind Report 2022 (2023), the global installed wind capacity was over 837 GW at the end of 2022, and nearly all of this capacity is filled by Horizontal Axis Wind Turbines (HAWTs).

Producing more energy from the unit land (footprint power density) is as essential as producing more energy from an individual turbine. After the rapid development of wind power plants (WPPs), one of the most emerging concerns in the development of WPPs is optimizing land use because of the decrease in the amount of available and suitable fields and the increased prices for the land. In contrast, studies on wind power plants comprised of HAWTs have presented the importance of spacing between turbines for minimizing wake losses. As a result of continuous improvement in the technology of HAWTs, blade lengths and hub heights are getting bigger. Consequently, the spacing between the turbines has been increasing to avoid aerodynamic interferences with the neighboring turbines. Therefore, the land requirement of the WPPs increases.

VAWTs have several advantages over HAWTs, such as eliminating the yaw mechanism, easily extendable power by increasing heights of the blades, and having lower acoustic signatures. Recently it is also shown that footprint power density can be increased up to 20 W/m^2 in the case of using counter-rotating VAWT pairs for sites with 10m/s and above mean wind speeds. Moreover, Dabiri, Greer, Koseff, Moin & Peng (2015) reported that VAWTs foot print power densities are much higher than the footprint power density of wind power plants consisting of traditional HAWTs ($5W/m^2$) and results remain proportionally constant even for the lower wind speeds

(Figure 1.1). The results cause a change in the perspective of the way of energy harvesting from wind power. The effect of the new approach has not only been seen in the literature but also on the commercial side evoked by the patent published by Craig & Dabiri (2015).

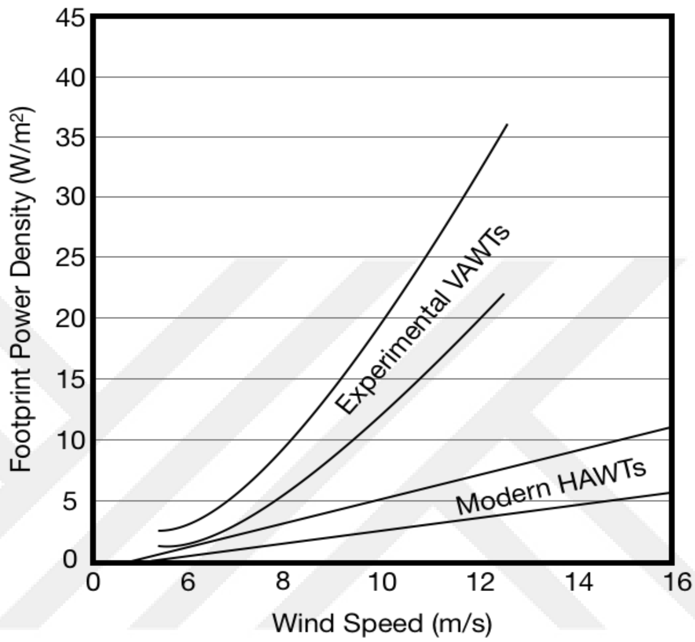

Figure 1.1 Footprint power density of VAWTs vs HAWTs

Therefore, the purpose of this study was to present a detailed overview of the energy interaction between closely located VAWTs. To achieve this goal, a comprehensive analysis of the literature on the interaction of VAWTs in pairs was performed first. Then, the study was extended to evaluate the energy interaction of VAWTs at three varying distances for the very first time in the nearshore experiment site.

CHAPTER TWO
PREVIOUS STUDIES

In the early 1980s, Schatzle, Klimas & Spahr (1981) conducted the initial research on the aerodynamic interference between two Darrieus-type wind turbines. The authors investigated the energy interaction of the turbines that have center-to-center distance of 1.5 diameter by using a vortex/lifting–line model for different prevailing wind directions. They used bound vortices and free vortices to represent blades and wakes, respectively. They found the straights of filaments and then determined the velocity induced by the entire vortex system on any given point. Then velocities are integrated with respect to time to yield a developing wake geometry.

In contrast to horizontal axis wind turbines, the study concludes that the power coefficient of the downwind turbine decreases by less than 20% only when the lines of centers are coincident with prevailing wind direction and closely located, such as the distance of 1,5 diameter. It is also shown that increasing tip speed ratio increases the decrement of the energy output of downwind-located wind turbines. Unlike how Kinzel et al. resulted after years, they explained that all these power decrements are due to the induced-power angularities, not the speed deficits. Kinzel et al. measured a high planform kinetic energy flux for the VAWT array, which accelerates the wind speed recovery in the wake regions.

After a decade of silence in the literature, Rajagopalan, Klimas & Rickerl (1990) investigated the aerodynamic performance of closely located Darrieus-type vertical axis wind turbines in different configurations, from one pair to a big cluster including 21 turbines. Unlike the previous study, they idealized the turbines as momentum sources then, the flow field was determined by solving the incompressible Navier-Stokes equations for steady, laminar, and incompressible flow. Despite using different modeling performances of turbines are compared with a stand-alone wind turbine for the similar flow circumstances like the previous study. In contrast with the previous study, Rajagopalan R. et al. also showed that each turbine of the pair, with a spacing of 6D, has higher performance than a case of a stand-alone for all positioning angles except the concentric positioned with the prevailing wind direction. Disagreement of results can occur due to the use of different modelings, and this path-breaking result of the investigation triggered more studies.

An inventor, Robert Thomas (2004) from the USA, came up with a concept called "Bush & Tree". This concept involves installing pairs of VAWTs alongside HAWTs within wind farms. The aim is to increase the energy output of power plants. He secured a patent for his idea in 2004. The inventor suggests separating VAWTs within 2 to 3 radius shaft-to-shaft distance and operating them in counter rotation. It is also suggested to have rotor solidity between 30% to 40%.

Whittlesey, Liska, & Dabiri (2010) developed a potential flow model for an isolated Savonius Type VAWT and its wake, then investigated the effects of its wake on an array including 16x16 units. The model is developed by the motivation of demonstrated benefits of the reversed Kármán vortex street on the propulsion of the schooling fish. What is more the schooling fish arrangement significantly increases the energy output of an array of VAWTs due to the advantage of shed vortices. The potential flow model developed in this study was fed by the measured data from a VAWT, which has a rotor diameter of 1.5m and a height of 2m. Two cup anemometers were employed to characterize flow around the turbine by positioning them in 18 different locations. This study shows the possibility of VAWTs working in an array can have 40% higher performance than a stand-alone one. It is also concluded that a properly located counter-rotating pair of VAWTs have two times more energy output than HAWTs for the given area.

Dabiri (2011) performed the first site experiments in the literature by using counter-rotating, 10 m tall Darrieus-type VAWTs. Rotational speed, energy production of each turbine, and meteorological parameters were logged at 10m height from June to September of 2010. The studied site was located in the northern part of LA with a relatively flat topographic property, where the mean wind speed is 7.8 m/s by 2.6 m/s standard deviations. 6 units of 10m tall VAWTs were employed for the experiments. Each turbine had a 1.2 m diameter (D), and 3 of them rotated counter-clockwise while others rotated clockwise. Pairs configured with 1.65 turbine diameter distance from each other, and Dabiri (2011) concluded that close proximity of the VAWTs slightly improves the performance relative to the isolated condition while HAWTs have 20%

to 50% performance reduction under the same conditions. Significant performance reduction is observed when a turbine is located in the downwind direction, and performance reduction is limited to only %5 of the isolated turbine when the turbine distance is increased to 4 D. It is seen that 6 VAWT units have 48.6 m^2 footprint area and 21 to 47 W/m^2 power density which means a few times more energy productions from the same area then HAWTs which have 2 – 3 W/m^2 typically. Furthermore, presented results are extrapolated to a larger wind farm comprised of VAWTs located at 4D distances from each other with conservative assumptions for aerodynamic losses and capacity factors. The calculated power density is around 18 W/m^2 which is still 6 – 9 times of power density of HAWTs.

After Dabiri's (2011) innovative study, the energy recovery mechanism and wake interactions of each turbine became much more interesting for the researchers. Kinzel, Mulligan & Dabiri (2013) investigated the energy fluxes in an 18-turbine array of VAWTs. They measured planform kinetic energy fluxes of VAWTs by using a mobile meteorologic station that includes 7 ultrasonic anemometers. Study shows that local velocities are recovered to 95% of upwind velocity within a 6D distance downwind from each pair which is more than double for a typical HAWT included in conventional wind power plants.

Korobenko, Hsu, Akkerman, & Bazilevs (2014) presented the first 3D aerodynamics modeling of two side-by-side counter-rotating VAWTs. They used a moving domain to handle rotor-stator interactions for 1.32D distanced pairs, which distance lets us compare the results with Dabiri's (2011) experimental work. Each turbine represents a 3.5kW, three-bladed, H-Darrieus type VAWT which has a NACA0015 airfoil profile with a chord length of 0.4m blades and 1.25m radius. The modeled turbine was tested for full scale at a low-speed wind tunnel before, so the result of the tests allows researchers to validate their analytical model. VAWTs are positioned to have 60 degrees of phase shift at the multiple turbine simulations. The analysis was performed for a constant rotor speed of 115 rpm for 10m/s incoming wind speed, which means the tip speed ratio is 1.5. This value is relatively low when compared to the overall performance curve of the H-Darrieus VAWTs. They investigated the performance of the stand-alone VAWT first and then, presented the vorticity iso surfaces of the model at a time instant colored by velocity magnitude in 3D for the first time. Aerodynamic torque results showed that the coupled turbines have the same output for the azimuth angles of the maximum torque produced region while having a slight reduction for the angles of the minimum torque produced region.

A pair of H-Darrieus type VAWT was studied in a water tunnel by Kim & Gharib (2014) to investigate the effect of a deflecting plate located in the upwind region. A NACA0012 profiled blade employed for the experiments in the water tunnel has 1.0m and 0.5m width and height, respectively. The experimental setup included a torque meter which was connected to the free surface of the rotor, which has 0.6m diameter. The other side of the torque meter was linked with a stepper motor, and the tunnel provided 0.23 m/s free stream velocity constantly while the motor rotated the blade in a range of 0.3 to 0.75 rev/s in 0.05 rev/s increment. PIV measurements were experienced by a CCD camera. Effects of a deflector on the power performance coefficient were investigated first, and increased energy conversion efficiency is observed as a result of increased local flow velocity without applying any complicated control mechanism. Due to the enhanced energy conversion efficiency, the usage of deflecting plates is encouraged.

Besides the studies that focus on increasing the efficiency of a single VAWT or a pair of VAWTs, much investigation is also done to increase the energy output of the power plant area by optimizing the layout of VAWTs. Sai, Yadav, Raj & Gupta (2014) did a study that investigated the optimum distance between VAWTs working in the array for six different arrangements. Then, the optimum layout of 12 unit VAWTs working in an array is studied. The study is enlarged by investigating the effects of varying angle of attack and wind speeds of 0°, 4°, 8°, 12.53° and 3m/s, 4m/s, and 5 m/s, respectively. Velocity contours of the domain were presented for all studied cases. It is concluded that 1.59% energy generation increment of a single turbine can be achieved by optimizing the layout of an array.

A new model of the flow through an array of VAWTs is developed by Araya, Craig, Kinzel, & Dabiri (2014) that represents each turbine by using a uniform flow and pairs of potential sources and sinks. This model is called “leaky Rankine body” (LRB) and includes unequal strength of source and sink to represent each VAWT. LRB can predict the performance of an array within a certain statistical certainty. They employed site measurements at the same experimental site where Dabiri (2011) investigated before. The experimental site includes 18 units of counter-rotating VAWTs working in pairs located a center-to-center distance of 1.65D. Wind speed was measured by 7 units of a three-component ultrasonic anemometer mounted on a meteorological mast. Turbine output was logged on a data logger at 10-minute intervals. 3 years measurement campaign was used for the validation of LRB, and it was concluded that LRB is capable of determining optimal array configuration and performance within a certain statistical certainty with significantly less computational expenses than known models in the literature. 7% energy production increment relative to an isolated turbine is observed for a pair of VAWT by LRB, while only %5 was observed in previous field measurements done by Dabiri (2011) for a similar configuration.

The energy enhancement mechanism of coupled vertical axis wind turbines by performing 2D CFD analysis was investigated by Mehrpooya (2014). NACA0021 is chosen as the airfoil of the turbine model with a rotor diameter of 1.03m and chord length of 0.85m. Performance of the stand-alone VAWT is investigated by performing CFD analysis to present the power coefficient, blade torque coefficient, and net torque coefficient as a function of tip speed ratios of 1.5, 2, 2.5, and 3. Inlet velocity of the simulation was 9 m/s, and the model was validated by comparing the average power coefficient of results between the studies of Castelli et al. (2011), Kozak et al. (2014a) and Kozak et al. (2014b). After clarifying the performance of a stand-alone VAWT, performance-limiting factors are explained by visualization of flow near the blades and rotor. Lastly, the power output of counter-rotating VAWTs are investigated, and it is concluded that a pair of turbine has a spacing of 1.5D and a tip speed ratio of 3 is the highest power enhancement by 22% increased turbine power coefficient.

Another field study was done at the Caltech Field Laboratory for Optimized Wind Energy by Dabiri, Greer, Koseff, Moin, & Peng (2015) to investigate aerodynamic interactions and power generation mechanisms of closely located, counter-rotating VAWTs. 24 units of commercially available VAWTs are tested in different siting positions, and over 10000 hours of data are logged in full-scale field tests of 10m height VAWTs. The results demonstrated that more than 10 times of footprint power density could be achieved at the wind farms that include closely located pairs of counter-rotating VAWTs than the wind farms that include modern horizontal axis wind turbines. These critical results of the study highlight several opportunities for technology developers, such as repowering technologies for aging wind farms and personalized energy generation in remote villages. On the other hand, it also promises several opportunities for researchers, such as wind turbine design for manufacturability and reliability, wind energy resource quantification, and wind turbine array optimization.

Zanforlin & Nishino (2016) performed extensive 2D CFD analysis to investigate the main flow mechanisms contributing to the enhanced performance of VAWTs working in a pair compared to an isolated one. They studied the effects of the distance of turbines in the pair, tip-speed-ratios, and wind directions. DU06W200 is chosen as an airfoil and the model is validated by an experimental study within less than 20% compatibility. All studies were done for two different layouts of a counter-rotating pair, one of them was turning from the inside out while other one was the outside in. Studies are performed for 8m/s free wind speed, distances of 1.5D, 2D, 2.5D and 3D for turbine-to-turbine axis and TSR of 2.3, 2.7 and 3.2, respectively. Results show that different layout of turbines results in different wake characteristics. Flow acceleration can be higher at the outside or at the inside of pairs depending on the turning directions of turbines. Streamlines of the flow tend to stay parallel to the symmetry plane for the inside-out configuration while tend to diverge for an isolated turbine. It is concluded that the presence of the neighboring VAWT contributes to the local flows, which generates lift and torque in the upwind region. If the turbines in the pair are located side by side, y-velocity suppression in the upwind path and wake contraction in the downwind path are two main mechanisms for enhanced performance of counter-rotating VAWTs. Result of the high-speed local flow to the downstream turbines, increased power output is also observed for the downstream turbines in a staggered pattern with respect to the wind direction. They also investigated the effects of TSR on the power enhancement mechanism and focused on the effects on an isolated turbine first. It is concluded that an increment in TSR leads to a reduction of the turbine permeability, which ends up behaving like a bluff body. As a result of that, a reduction of flow through the turbine and an increment of flow at the turbine sites are observed. When it comes to turbines working in pair, permeability decreases by an increment of TSR with respect to the isolated one. Higher values of y-velocities arise at the outside of turbines, which creates a delay in the torque production at the entrance of the upwind path. As contrast, a reduction of y-velocity is observed at the inside part of pairs as the TSR increases, which leads to the extension of torque production during the late part of the upwind path. The last result seems the main reason for relative power gain with TSR. It is found that wind direction is not essential for the isolated turbine, while it is essential for a pair.

In contrast to Rajagopalan et al. (1990), Zanforlin & Nishino (2016) found that the performance of the downstream turbine is better than the upstream one, except in the case of wind direction was 67.5 degrees. They also investigated the effect of distance between the turbine axis and reported that the effect of turbine distance is much less significant for the side-by-side configuration, and the distance of 3D seems to be the best case for varying wind directions. The results of the study encourage the next studies to focus on the prediction of the performance of small-size farms that include counter-rotating VAWTs.

Another investigation about the performance enhancement of downstream turbines in an array was done by Brownstein, Kinzel & Dabiri (2016). They observed an increased power production in downstream vertical axis wind turbines when located offset from the wake of the upstream turbine. 24 units of counter-rotating VAWTs, each has a diameter of 1.2m, were tested at the Caltech Field Laboratory for Optimized Wind Energy (FLOWE) for 3 years. Also, 3 units of 15W model-scale VAWTs were employed in a wind tunnel at wind speeds of 8m/s. Co-rotating VAWTs were employed in two different sets of experiments, which were done at the wind tunnel. The first one included a VAWT located 1D downstream of the inlet of the wind tunnel, while the other one was located 4D downstream of the inlet at 24 different points in the perpendicular direction. The second set of experiments had arrays of three VAWTs in all array combinations, turbines located at the 1D and 4D downwind direction with -1.5D, 0D, and 1.5D spaced from the centerline. Both Laboratory and field measurements showed that flow acceleration around the upstream turbines caused the performance enhancement for co-rotating and counter-rotating wind turbines downstream. The study also validates that the LRB model, developed by Araya et al., captures the enhancement effect well. Comparison between LRB prediction and experimental measurements have a strong correlation of r^2 =0.94. They also introduced a promising array configuration called “Truss-Shaped” for optimizing the energy production of a VAWTs array by increasing the energy extraction of downstream VAWTs in the array. Dynamic effects of placing turbines in close proximity, which cannot be captured well by the LRB model, are highlighted for further investigations.

Like Brownstein et al. (2016), Zuo, Wang & Kang (2016) also studied the wake effect of an upstream VAWT on the performance of a downstream VAWT. They investigated the 2 units VAWTs located along to the free stream velocity, while Brownstein et al. (2016) focused on VAWTs positioned with offset. Unsteady Reynolds averaged Navier-Stokes (RANS) equations, and the shear stress transport (SST) model was employed for 2 units of turbines having a distance from 2D to 17D with 2D intervals. Analyses were performed for 5.07 m/s free wind speed, which corresponds to tip speed ratio of 2.15. In contrast with previous studies, it is concluded that more than 15D distance is required for the recovery of wind speed for the downstream wind turbine, which is more significant than what HAWTs require. Another clear conclusion of the study is the observed double-peak profile of the tangential force coefficient of each blade, which occurs periodically for every 120 degrees in case of no wake influence. The tangential force coefficient of downstream wind turbines becomes more complex because of the wake influence and is smaller for small-spaced distances.

After several researches on VAWTs working in pair, the most efficient array configuration was investigated by Lam & Peng (2017a). Co-rotating and counter-rotating couples were tested in a wind tunnel by following systematic wake measurements to investigate wake characteristics along the mid-plane and vertical plane. The perfect symmetric pattern of the wake was observed for the counter-rotating couples, while an asymmetric pattern was observed for the co-rotating configuration. Measurements were extended up to 10D away from the mid-plane of tested turbines, and more than 85% velocity recovery was observed at the 10D distance. Coupled working VAWTs were suggested for the wind farm applications because of the limited wake spread, rapid wake recovery, and reduced vibrations on the tower.

Due to the energy enhancement mechanism of coupled and arrayed VAWTs, wind farming and siting was the following exciting topic for Lam & Peng (2017b) They developed a wake model to predict the best locations for straight-bladed VAWTs in a farm for increasing energy production from given land. Their model uses two semi-ellipses to represent the wake region of a VAWT at a given distance. They also performed several wind tunnel tests and concluded well agreement between model-predicted results and experimental results. 6D distance in the prevailing direction is accepted as far enough for velocity recovery in a wind farm as a result of the asymmetric behavior of wakes. The mentioned results become a contrast with Zuo et al. (2016) but compromise well with the rest of the previous studies. The developed model represents the wind properties successfully. Hence, the optimization for the micro-siting of a wind farm was done by raising power output up to 10.6%. What's more, the wake loss coefficient was decreased from 13.5% to 4.3% by the model.

Tavernier, Ferreira, Li, Paulsen, & Madsen (2018) investigated the power performance enhancement capability of vertical axis wind turbines working in pair and the physics behind the double-rotor configuration. They performed parametric and numerical simulations by using a two-dimensional panel/vortex model, which was developed by Ferreira (2009). The wake of both single and double-rotor configurations was investigated by using two straight-bladed turbines having a solidity of 0.1. The isolated turbine was compared with three different paired rotor configurations (co-rotating, counter-up, and counter-down) that have fixed rotor spacing of 1.2D. It is shown that the wake development of all double-rotor configurations is rather similar. Furthermore, the flow between the two rotors in a double configuration is more accelerated than the flow around the isolated one.

Moreover, they also studied the effect of the wind direction on the power coefficient for counter-rotating configuration normalized by an isolated turbine. They concluded that more than 7% increase of power coefficient is observed for a particular wind direction.

Likewise, Vergaerde et al. (2018) also compared the power coefficients between a pair of vertical-axis wind turbines and an isolated turbine. An individual scaled VAWT model was tested on the wind tunnel first, then in a center-to-center 1.3 D spaced pair to investigate the interaction of a pair of vertical axis wind turbines. As a result of wind tunnel experiments, 17% and 14% increments are observed for the inner-upwind configuration and inner-downwind configuration, respectively.

Hezaveh et al. (2018) performed a numerical analysis to extend the discussion from the energy interaction of VAWTs working in pairs to VAWT pair clusters. They employed an actuator line model, which was validated against the previous field experiments for two-turbine configuration, and then the effects of turbine spacing were investigated to optimize a single cluster in terms of the overall power output and the needed downstream wake-recovery distance. It was shown that increased turbine spacing resulted in increased overall power output for a cluster. Further simulations were performed for only 3D, 4D, and 5D spacing distances and concluded that 5D generates the highest cluster-averaged power over all wind directions, which increment is about 10% compared with the power output of three isolated turbines.

Nazari, Zamani & Moshizi (2018) investigated the capabilities of 2D and 3D CFD approaches for three units of VAWTs, which are located in line with the prevailing wind direction as the worst-case configuration for the downwind turbine. They employed a rotor, which has 2.5m diameter manufactured by NACA0015 aerofoils with 0.4m chord length. They concluded that there is a significant deviation in the aerodynamic performance of 2D and 3D simulations for the upwind turbine, while there is no remarkable difference for the downwind turbine. They also reported that an over-predicted performance coefficient was observed for 2D simulations for the upwind turbine under any circumstances.

The energy interaction of VAWTs working in pairs was also investigated by Bangga, Lutz & Kramer (2018) for five different rotor distances and three combinations of rotational directions. They used a two-bladed rotor, which has 2m diameter and NACA0021 aerofoil profile. It was reported that both the power output and thrust forces of the turbines in the pair are affected by the rotational direction and distance of each turbine. A local flow increase in the area between the turbines, which is responsible for the power improvement, was observed. On the other hand, vortex shedding, which causes a reduction of the power output, was also observed, and these two effects have a strong dependency on TSR. Considering the observations, two different layouts were proposed for 6 units of VAWTs working as side-by-side configurations.

Brownstein, Wei & Dabiri (2019) conducted an experimental investigation using two commercially available vertical axis wind turbines (VAWTs) in a wind tunnel with varied incident wind directions. The study revealed a significant performance enhancement of 20% for the VAWTs positioned at proximity of 1.25D.

Jin, Zong, Jiang & Zou (2020) validated a CFD numerical model for predicting the aerodynamic performance of a VAWT and investigating the flow around counter-rotating turbines. The study found that arranging the turbines side by side in a counter-rotating configuration improves the aerodynamic performance by altering the incident flow field and generating a higher-pressure difference and driving torque. Additionally, a smaller distance between the turbines leads to a larger power-extraction coefficient. The reported enhancement is 18% for 1.2D proximity.

Zheng, Zheng & Zhao (2020) studied MW-size VAWT clusters in a parallel arrangement and found that the mechanism for enhanced performance is mainly due to the constraint effect in the lateral direction, and the optimized spacing is 1.5-1.6D. In contrast, in a staggered arrangement, the enhanced performance is due to the accelerated flow induced by the upstream turbines. The authors observed the best performance when the downstream turbine was located in 2.0- 2.5D distance along the prevailing wind direction and 2.8 - 3.5D distance in line as perpendicular to the prevailing wind direction. The maximum normalized power gain coefficient for both parallel and incident arrangement is 8.1% and 8.4, respectively.

Shaheen (2021) investigated the mutual effect between variable pitch VAWTs in close proximity of 1.25D and showed improvement in the performance of a pair up to 26% compared to a stand-alone turbine at the 2.8 TSR.

Sun & planet configuration is introduced by Durkacz et al. (2021) to achieve performance enhancement for VAWTs working in pair. The authors performed a parametric study which ended up 1.01% increment observation for 5D proximity at 30 degrees oblique configuration.

Su, Meng, Qu & Lei (2021) performed wind tunnel experiments to study the impact of array configuration on the power performance of VAWTs. Their findings indicate that the optimal layout is a counter-forward rotation configuration, where the turbines rotate in opposite directions. They observed that when the distance between the turbines is 2.4 D, the maximum power coefficient of the turbine pair is 8.2% higher compared to that of an isolated turbine.

Azadani (2023) reviewed related literature and showed that VAWTs placed close to each other exhibit improved power performance. The optimal layout for a pair of VAWTs involves side-by-side located, counter-rotating turbines, which benefit from flow restriction, accelerated flow, wake contraction, and reduced bypass flow. Design parameters such as turbine spacing, rotation direction, TSR, solidity, and aspect ratio significantly affect the performance of the pair and require further investigation.

After conducting a thorough review of the literature, it is evident that one of the major hurdles is to analyze all the findings in a comprehensive manner. Therefore, this thesis aims to provide a conclusive analysis of H-Darrieus-type VAWTs that work in pairs. To achieve this, the results of previous studies have been reduced and normalized. This will allow for a more mature and informed conclusion to be reached for the first time.

CHAPTER THREE
METHODOLOGY & DATA ANALYSIS

3.1 Data reduction and normalization

Mainly two different procedures are well accepted in the literature to investigate performance change of VAWTs working in pairs. Some of the researchers investigated two turbines' performance change simultaneously, obtaining a single performance coefficient for the turbine pair (Cp_{mean}), others selected a primary turbine (represented by PT in Figure 3.1) and investigated this turbine's performance (Cp_p) change while a secondary turbine (represented by ST in Figure 3.1) (Cp_s) is located nearby. The first approach is more practical to understand the overall performance change of pairs and more realistic because the overall performance change is the key issue for the wind energy industry. On the other hand, the later approach is more common in the literature. This approach results in a more fundamental understanding of investigating the performance change of the primary turbine.

Moreover, the performance of the secondary turbine can be obtained by switching the turbines (assuming the previous primary turbine is the secondary one and vice versa) because of the equivalency of their relative positions. Therefore, the overall turbine pair performance can be obtained by combining the performance change of both primary and secondary turbines. Due to the mentioned straightforwardness, the data analysis of this study is based on the later approach whenever it is available. Nevertheless, this brings out a requirement of data conversion for the research results that investigated two turbines' performance change simultaneously (first approach). In this case, the combined performance coefficient results are assumed as the performance change of the primary turbine.

Due to the different designs and operational conditions of the VAWTs in the literature, change of power coefficients are not sufficient enough to compare all available data. Therefore, the performance changes are given as a normalized power coefficient (Cp_n), defined as the ratio of mean power coefficient (Cp_{mean}) of VAWTs to the stand-alone turbine's power coefficient (Cp_{sa}) where, Cp_{mean} represents the average performance coefficient value of primary turbine (Cp_p) and secondary turbine (Cp_s), as given in Eq. 3.1.

$$Cp_n = \frac{Cp_{mean}}{Cp_{sa}} = \frac{\left(\frac{Cp_p + Cp_s}{2}\right)}{Cp_{sa}} \tag{3.1}$$

The azimuthal position of the secondary turbine with respect to the primary turbine (α) is another important parameter (Figure 3.1). However, research groups handled this parameter variously, which makes the comparison of the results a sophisticated task. Some researchers prefer changing the position of VAWTs while keeping the wind direction fixed, others prefer to keep turbine locations fixed while the wind direction is varied. Because of the technical limitations, wind tunnel studies are available only for fixed wind direction cases. Therefore, all results included in this study are normalized by the assumption that the prevailing wind direction is along 0° for the primary turbine. In addition, the positive direction is defined along the clockwise direction for the azimuthal position of the secondary turbine.

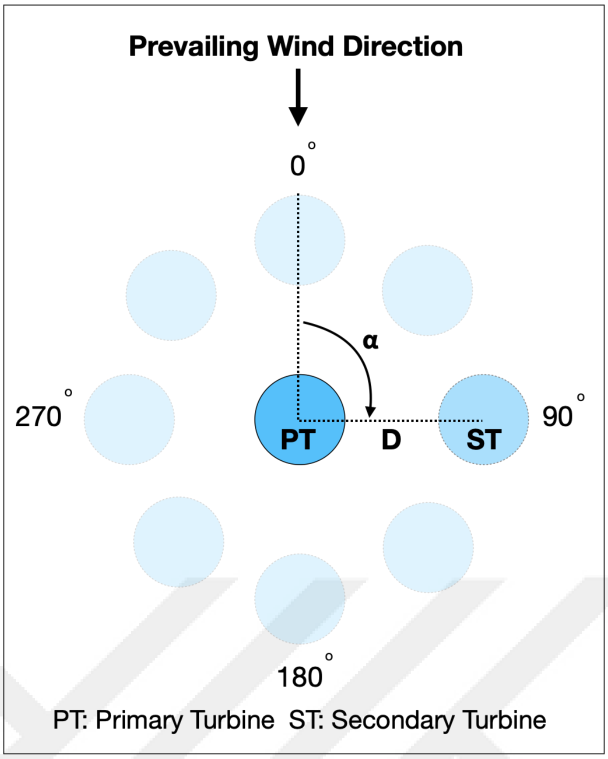

Figure 3.1 Schematic view of primary and secondary turbines

Besides, the distance between the PT and ST has not a common expression in the literature. Some researchers normalized the distance between the axes of the turbines by the diameter of the rotor, while others normalized the distance between the boundaries of the rotors by the diameter of the rotor. Therefore all the distances are presented in this study (D) are normalized as the distances between the axis of the PT and ST. Furthermore, identical turbines are employed in some studies to investigate overall performance of the pair without any definition of PT or ST. In case of the absence of defined PT or ST in the pair, the turbine located at the 90° (Figure 3.1) is assumed as ST in this study. The 2D approach is widely accepted in the literature for numerical analysis however, 3D results are employed in this thesis if both approaches are available for an article.

3.2 Description of near-shore experiment area

The experimental site is located in Çaltılıdere Town, situated in the northern region of Aliağa District, Izmir, Türkiye. Its elevation stands at 70m, offering unobstructed view of the sea from both the north and west. As depicted in Figure 3.2, the prevailing wind direction (PWD) at this location is from the north-east. The site's topography is classified as semi-complex due to the gentle slopes, small hills, and proximity to the shoreline, as illustrated in Figure 3.3.(Baser F.C. (2019).

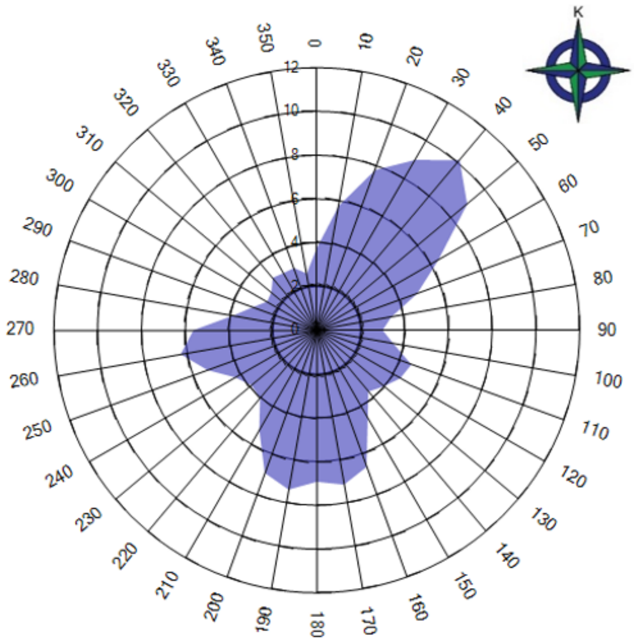

Figure 3.2 Prevailing wind direction of the experiment site

Figure 3.3 Location of the experiment site

3.3 Experimental setup

A pair of VAWT and a wind measurement station (WMS) are employed for 3 different proximities of VAWTs, which are aligned in line as perpendicular to the prevailing wind direction. Technical details of VAWTs are given in Table 3.1 (Wind-Er, 2023, August 26)

Table 3.1 Technical specification of VAWTs

Brand, Model	**Wind-Er, WindEr5.2**
Rotor Diameter (m)	2
Rotor Height (m)	2
Hub Height (m)	7.15
Solidity Ratio (Nc/D)	0.43
Tower Type	Lattice
Rated Power (W)	500
Rated Voltage (V)	24
Cut-in WindSpeed (m/s)	2.2
Cut-out WindSpeed (m/s)	20
Rated Wind Speed (m/s)	12.0
Rotor Speed Range (rpm)	0 – 250
Blade Profile	NACA 4418
Chord Length (m)	0.38

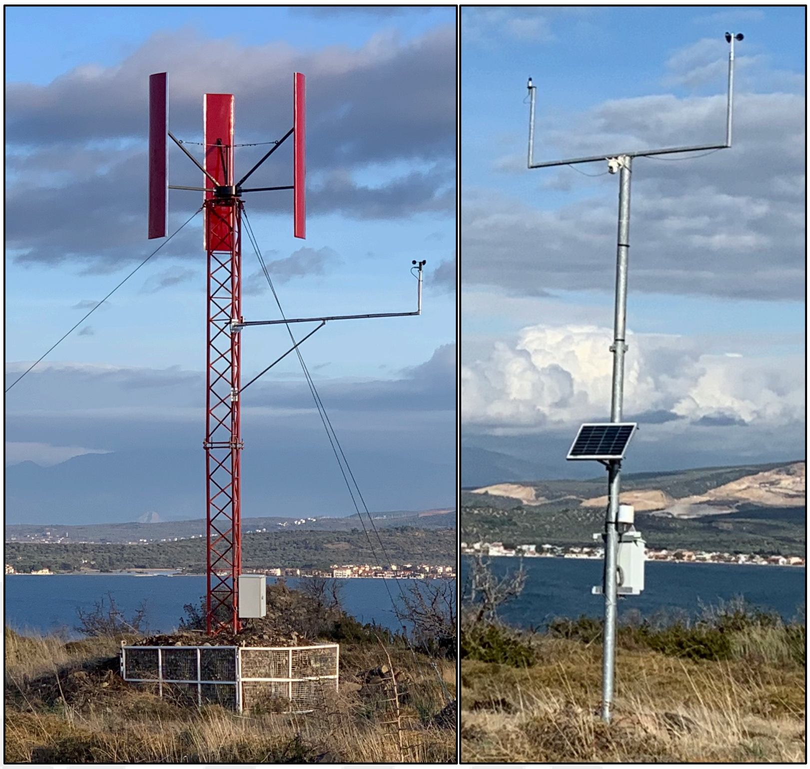

Figure 3.4 Experimental VAWT (left), wind measurement station (right)

The wind turbine controllers were equipped with real-time sensing capabilities for the rotational speed (RPM_i), battery voltage (V_i), and charging current (I_i), which were subsequently fed to a data logger. The data logger of wind turbines recorded a data line every 20 seconds onto an SD card, which was then uploaded to a web server via a GSM modem (Figure 3.4). Besides the data logged from wind turbines, WMS gathered the wind speed parameters such as Wind Speed (v_j) and Wind Direction (dir_j) in 1Hz then logged as a mean value of each 10 min. periods. In cases where the 10-minute and 20-second values need to be calculated together, it is assumed that the 10-minute averages remain constant for the entire 10 minutes while 20-second ones are fluctuating (Figure 3.4).

In accordance with the recommendations outlined in the IEC-61400-12-1 2nd Edition, a wind measurement station was installed at the site. The location and configuration of the wind measurement station were guided by Annex H of the standard (IEC61400-12, 2022). The wind measurement station was situated 6m ahead of the ST and aligned with the prevailing wind direction, as recommended by the standard. The wind measurement station comprised a first-class anemometer, a wind vane, a pressure sensor, and a temperature and humidity sensor, which measured the wind speed, wind direction, atmospheric pressure, ambient temperature, and humidity, respectively. In addition to the measurement sensors, a data logger was installed at the measurement station to record the mean of ten-minute-long gathered values at one-second intervals.

3.4 Configuration of site experiments

A pair of counter-rotating VAWTs are employed for the experiments called Primary Turbine (PT) and Secondary Turbine (ST). PT and wind measurement station (WMS) stayed fixed for all setups, while ST located in different proximity against PT for each configuration. Experiments were performed in 3 different proximities: 10D, 4D and 1.5D, where 10D represents stand-alone configuration as the 10D distance is far enough for the flow recovery, while 1.5D and 4D represent the close-proximity configuration of VAWTs (Lam & Peng, 2017a)

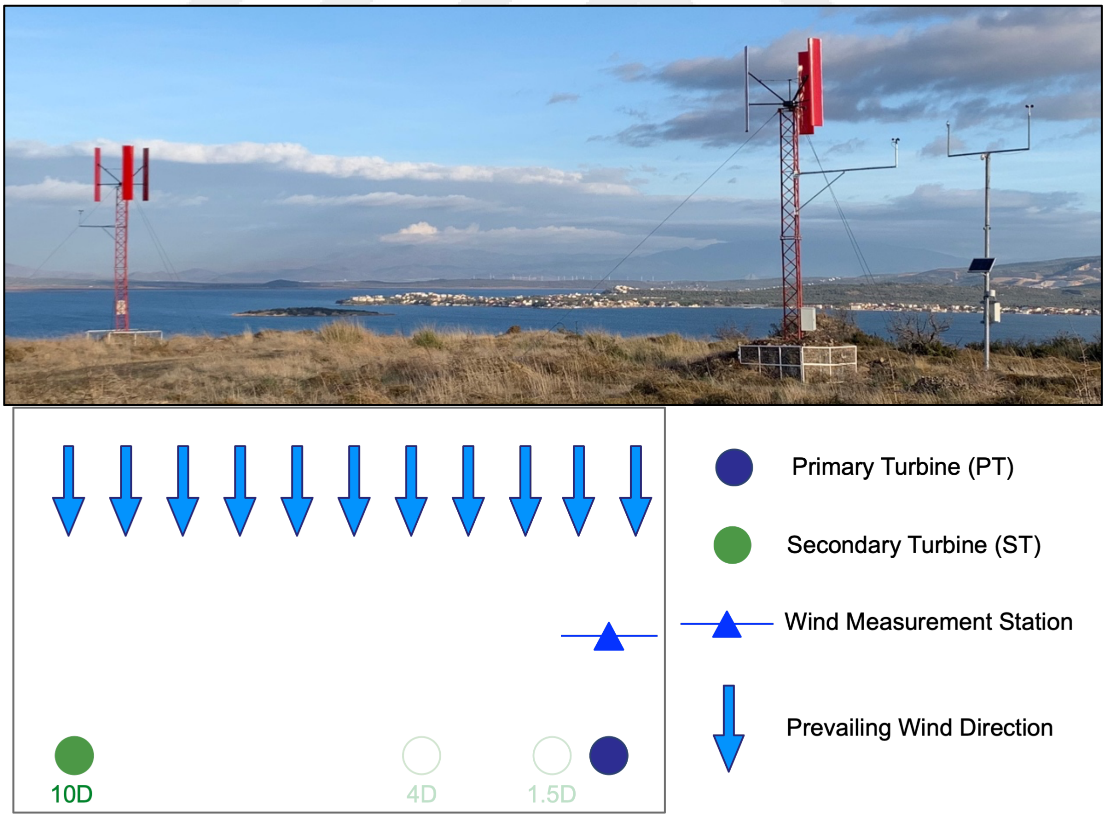

Figure 3.5 Picture (top) and schematic view (bottom) of 10D configuration

The 10D configuration represents the setup in which VAWTs are located at 10 diameters away from each other in perpendicular to the prevailing wind direction (Figure 3.5). The distance of 10D is deemed sufficient for recovery of the flow, where the wakes of the VAWTs do not interact with each other either parallel or perpendicular to the wind direction. That’s why the 10D configuration represents the stand-alone operating conditions. The performance coefficient of the VAWT pair is calculated as the mean average of the individual turbines' performances, as defined by Equation 3.6.

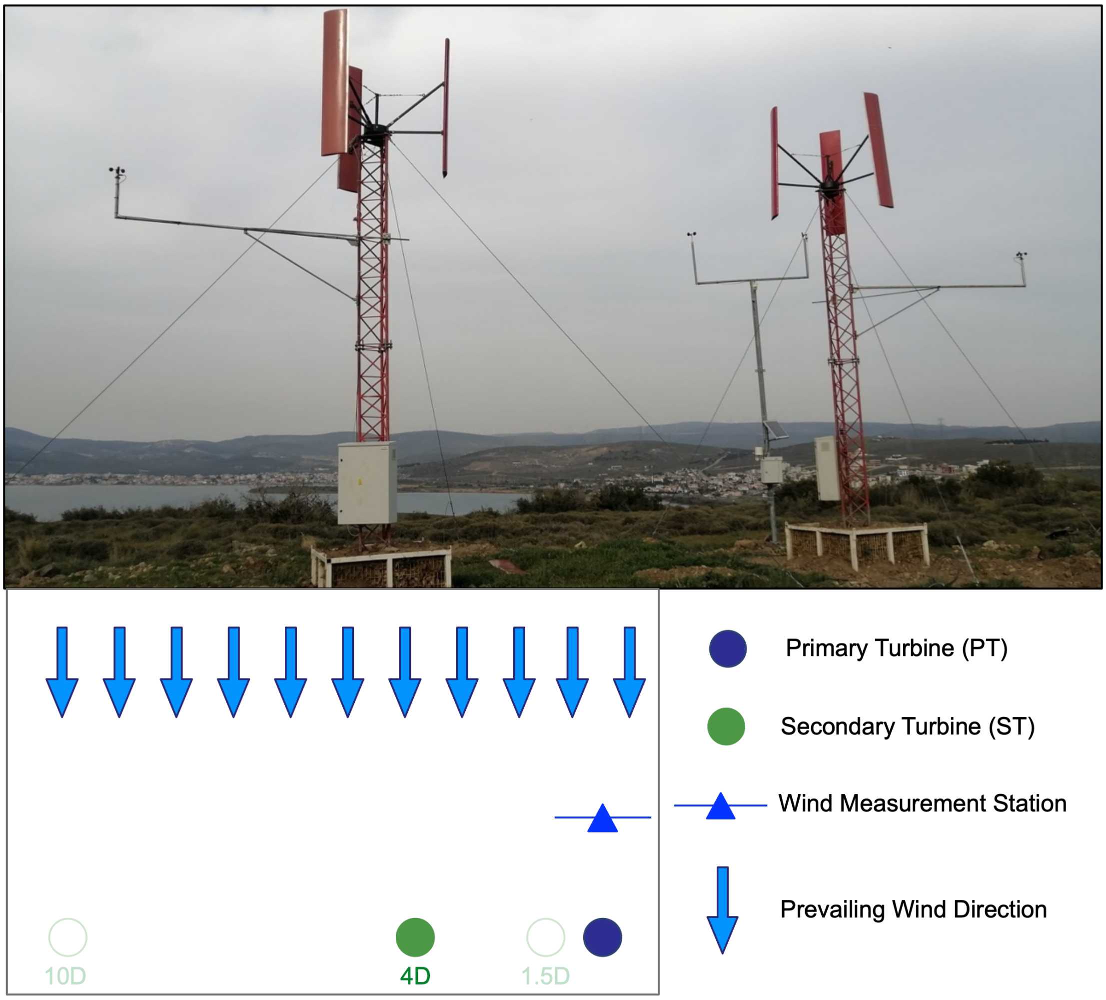

Figure 3.6 Picture (top) and schematic view (bottom) of 4D configuration

4D configuration represents the setup in which VAWTs are located 4 diameters away from each other in perpendicular to the prevailing wind direction (Figure 3.6). Achieving this configuration required changing the position of ST and getting closer to the PT however, the PT and meteorological measurement station stayed as where they were. The performance of the stand-alone configuration and the 4D configuration was analyzed comparatively. Accordingly, 1.5D configuration represents the setup in which VAWTs are located 1.5 diameters away from each other (Figure 3.7).

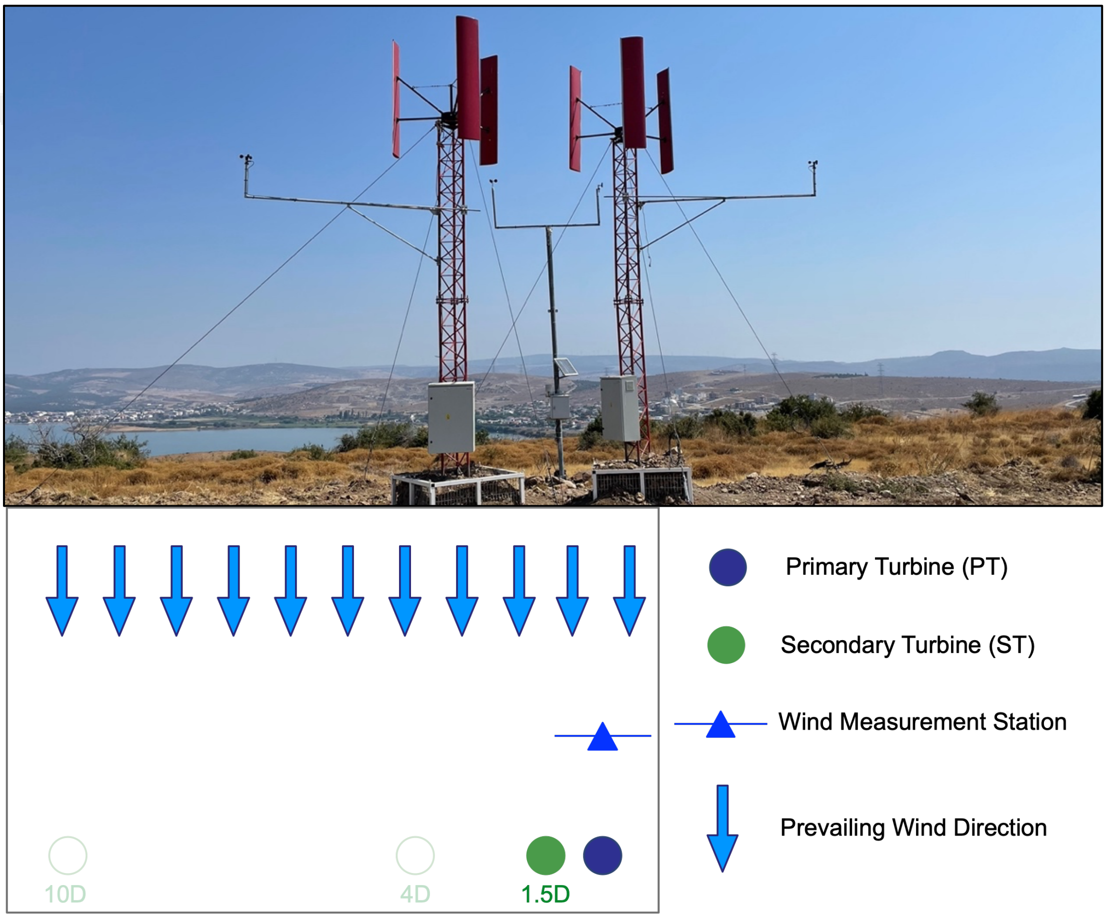

Figure 3.7 Picture (top) and schematic view (bottom) of 1.5D configuration

3.5 Data acquisition, processing and filtering

During the three different experimental periods detailed in Table 3.2, a total of 73498 data lines were utilized. The performance of different proximities was studied by comparing the power coefficient factor (C_p) as a function of the tip speed ratio (TSR). Rotational turbine speed, charging current, and battery voltages were independently logged by the turbines, while wind speed and wind direction were logged by the WMS.

Table 3.2 Experiment periods

Proximity	Starting Date	End Date	Logged Data Line	Logged Data h
10D	04.06.2021	11.06.2021	21575	119.9
4D	31.03.2022	07.04.2022	30918	171.8
1.5D	31.08.2021	06.09.2021	21009	116.7

Power coefficient factor is calculated by Equation 3.2;

$$Cp = \frac{P_i}{P_j} \tag{3.2}$$

The power of the turbine (P_i) in a logged line of *i* is calculated by Equation 3.3;

$$P_i = V_i \cdot I_i \tag{3.3}$$

where;

P_i = Calculated power of turbine for the data logged line *i* in watt
V_i = Logged battery voltage for the data line *i* in volt
I_i = Logged charging current for the data line *i* in amper

Power of the wind (P_j) is calculated by Equation 3.4;

$$P_j = \frac{1}{2} \cdot \varrho \cdot A v_j^3 \tag{3.4}$$

where;

ϱ = Air density in kg/m^3
A = Swept area of VAWT in m^2
v_j = Measured wind speed of the data line *j* in m/s

Beside the power coefficient, tip speed ratio is calculated by Equation 3.5;

$$TSR_i = \frac{\omega_i . r}{v_j} \tag{3.5}$$

where;

ω_i = rotational speed of the data line i in rad/s
r = radius of VAWT in m
v_j = Measured wind speed of the data line j in m/s

The power coefficients (Cp) for both PT and ST were calculated, and a mean Cp value was also determined by taking the mean of both turbines' power coefficients (Equation 3.6). This approach allowed for the establishment of a representative quantity for the power coefficient of the turbine pair.

$$Cp_{mean} = \frac{Cp_P + Cp_S}{2} \tag{3.6}$$

The first part of the field experiments was the processing of the data logged in the 10D distance configuration given in Figure 3.5. The time-dependent change of the results, where the raw data received was processed without being subjected to any filters, is given in Figure 3.8. As can be seen here, although similar behavior of the turbines is observed from the raw data, no meaningful conclusion can be drawn.

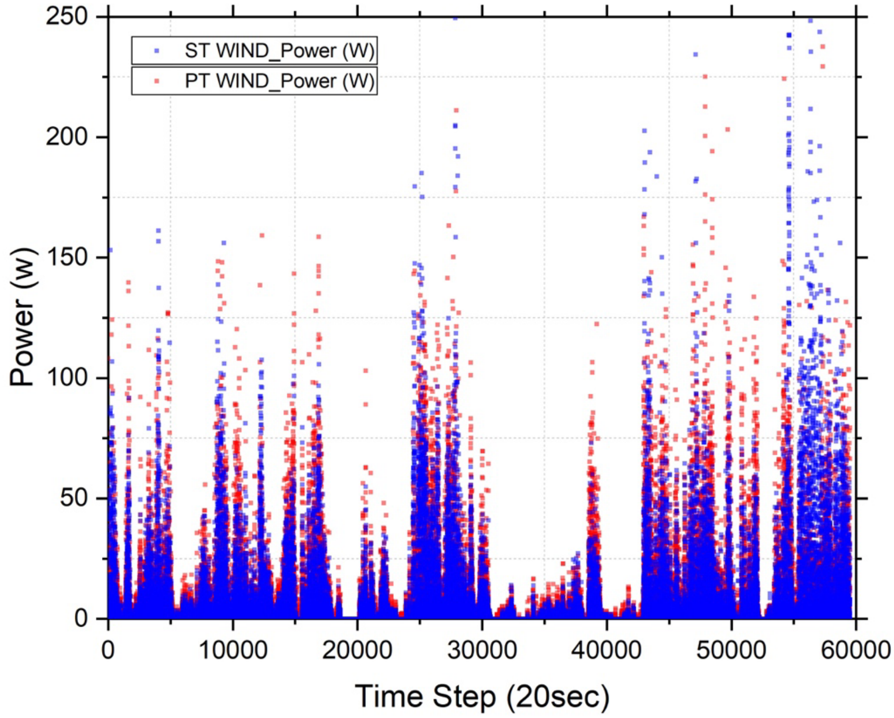

Figure 3.8 Power output of PT and ST as a function of time step

In order to develop a meaningful analysis for 10D proximity, the power performance coefficient of the turbines was calculated by executing Formula 3.2 and then plotted in Figure 3.9, as a function of wind speed. It is possible to examine the behavior in 3 different parts.

In the wind turbine's performance curve, the circular characteristic field is defined between 0 m/s - 8 m/s fort he first part. This area shows a systematic behavior, which is due to the control unit of the turbine not operating the turbine under the electrical load during start-up. Once the control unit turns on the electrical load, a high-efficiency area is observed at low wind speeds. However, as the output power of the turbine operating at load decreases, despite the wind speed increasing, the efficiency coefficient decreases.

The second zone is in the first braking area, which occurs around 8m/s and where the turbine controller tries to slow down the turbine due to speed control. It can be observed that yields decrease sharply in this region.

The last region is the low-efficiency region which occurs at speeds of 11 m/s and above. Although there is high wind power input in this region, the production of the turbine has been limited and low efficiency coefficients have been recorded.

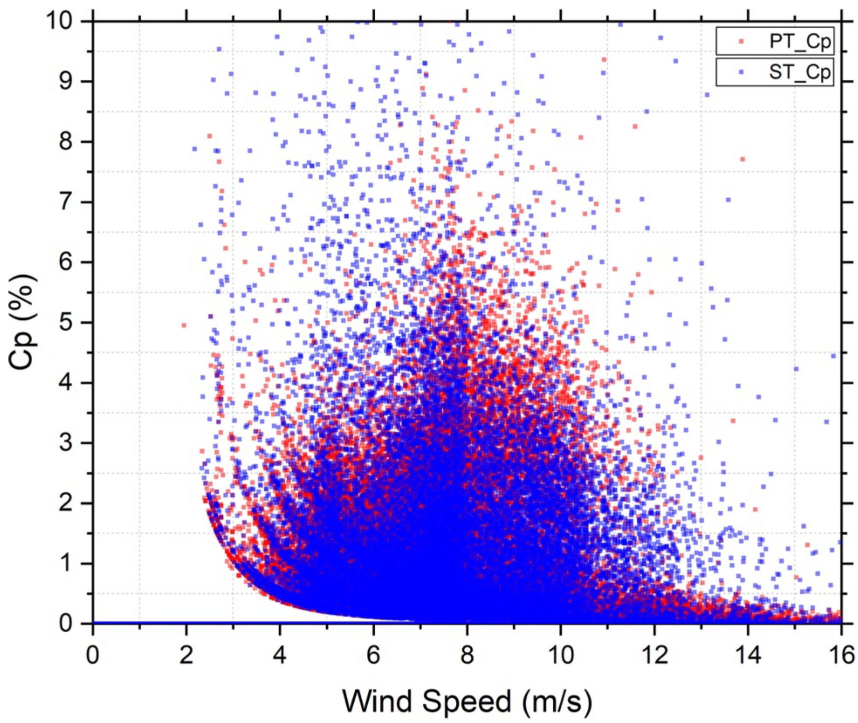

Figure 3.9 Power performance coefficient of turbines as a function of wind speed

It is common practice in the literature to evaluate turbine efficiency as a function of tip-speed-ratio, a dimensionless comparison parameter, instead of wind speed. In order to enhance the significance of the data obtained from the 10D proximity position, Figure 3.10 was plotted by re-defining the x-axis using Formula 3.5 as a function of TSR instead of wind speed.

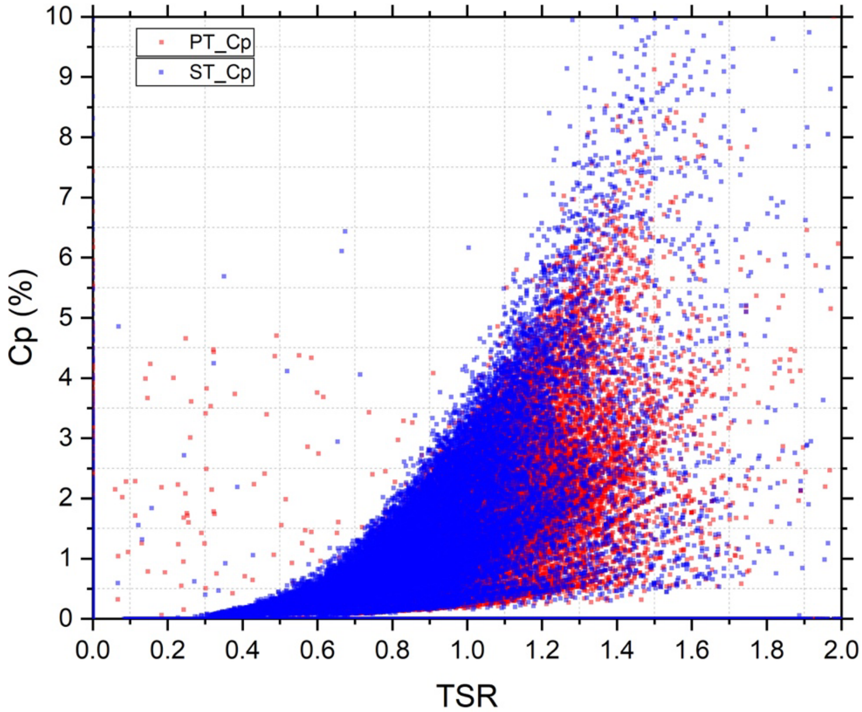

Figure 3.10 Power performance coefficient of turbines as a function of tip-speed-ratio

When Figure 3.10 is examined, it was determined that applying a series of filters would be necessary to analyze the logged data in a meaningful way. The filters would help to eliminate any invalid data logged during the experiments, thus providing a clearer plot. Thus, Filter #1 and Filter #2 were applied to clear "0" values from the results, while Filter #3 was applied to investigate the data lines where the VAWTs have the same characteristics only. Filtered data lines are binned by 0.2 TSR steps to present Cp values as a function of TSR (Figure 3.11).

Table 3.3 Applied data filters

Filter No	Applied Value	Filter
#1	Cp	< 0.01
#2	TSR	< 0.01
#3	$\lvert P_{PTi} - P_{STi} \rvert$	> 10

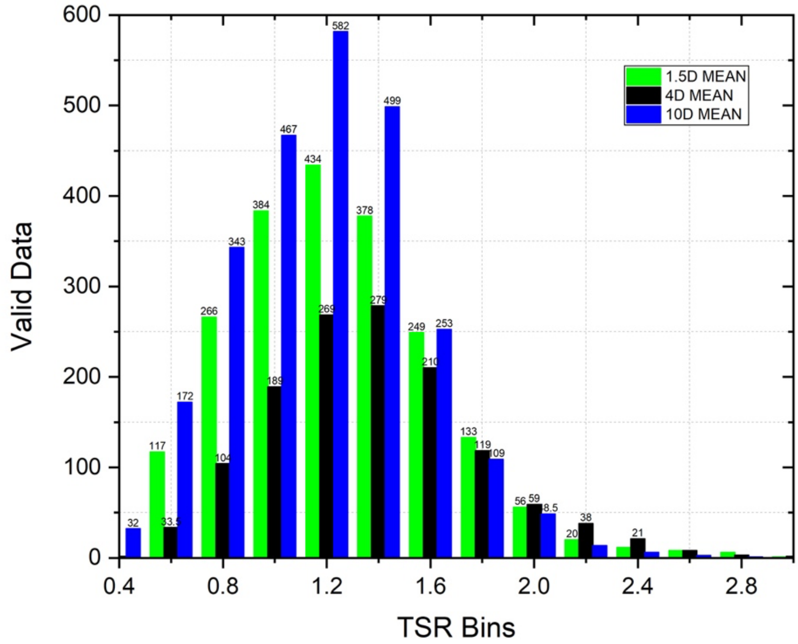

Figure 3.11 Employed valid data quantities for different configurations as a function of TSR bins.

Each TSR bin is represented by a mean value of consisted values for each different configuration (Equation 3.7).

$$TSR_{Mean} = \frac{\sum_{i=0}^{n} TSR_i}{n} \tag{3.7}$$

3.6 Uncertainty analysis

The first part of the uncertainty analysis is performed for C_p by Equation 3.8 as it is a function of measured values of turbine power and wind speed. Uncertainty of the measurement devices is given in Table 3.4

Table 3.4 Uncertainty of measurement devices

Device	Brand / Model	Uncertainty
Anemometer	Thies / First Class Advanced	1.00 %
Volt Meter	TGET / TGWS800W-24V	1.50 %
Amp Meter	TGET / TGWS800W-24V	1.25 %
Rotational Speed Meter	TGET / TGWS800W-24V	0.25 %

$$\Delta C_p = |\frac{P_t}{P_w}| \cdot \sqrt{\left(\frac{\Delta P_t}{P_t}\right)^2 + \left(\frac{\Delta P_w}{P_w}\right)^2} \tag{3.8}$$

Where,

$$\Delta P_t = |I \cdot V| \cdot \sqrt{\left(\frac{\Delta I}{I}\right)^2 + \left(\frac{\Delta V}{V}\right)^2} \tag{3.9}$$

$$= |I \cdot V| \cdot \sqrt{(0.015)^2 \cdot (0.0125)^2} = 0.0195 P_t$$

$$\Delta P_w = \frac{1}{2} \cdot \rho \cdot A \cdot v^3 \cdot \Delta v \tag{3.10}$$

$$\Delta P_w = 0.5 \cdot 1.225 \cdot 4 \cdot v^3 = 2.45 v^3 |\ v^3 = \alpha$$

$$\Delta P_w = 2.45 \cdot \Delta\alpha$$

$$\Delta\alpha = 3 \cdot v^3 \cdot \Delta v = 0.03 \cdot v^3$$

$$\Delta P_w = 2.45 \cdot \Delta\alpha = 2.45 \cdot 0.03 \cdot V^3 = 0.0735 V^3$$

$$\Delta C_p = \left|\frac{P_t}{P_w}\right| \cdot \sqrt{\left(\frac{\Delta P_t}{P_t}\right)^2 + \left(\frac{\Delta P_w}{P_w}\right)^2} \tag{3.11}$$

$$\Delta C_p = \left|\frac{P_t}{P_w}\right| \cdot \sqrt{\left(\frac{0.0195 \cdot P_t}{P_t}\right)^2 + \left(\frac{0.0735 \cdot v^3}{0.5 \cdot 1.225 \cdot 4 \cdot v^3}\right)^2}$$

$$\Delta C_p = C_p \cdot \sqrt{(0.0195)^2 \cdot (0.03)^2} = 0.035780$$

$$\Delta C_p = C_p \cdot 3.578\%$$

Beside the measurements, calculating a representative value for each bin including N data, and using mean values of the power coefficients of each turbine cause additional uncertainties calculated by Equation 3.12 and given on Figure 3.12.

$$Cp_{mean} = \frac{\sum_{i=1}^{N}(Cp_1, Cp_{2,}Cp_3, \dots , Cp_N)}{N} \tag{3.12}$$

$$\Delta Cp_{mean} = \frac{1}{N}\sqrt{\sum_{i=1}^{N}(\Delta Cp_1{}^2, \Delta Cp_2{}^2, \Delta Cp_3{}^2, \dots , \Delta Cp_N{}^2)}$$

Overall uncertainty budget belongs to the uncertainty of each power coefficient value and quantity of values in the related bin. Thus, it is seen from Equation 3.11 that the uncertainty of the measurement is inversely proportional to the quantity of measurement for the related bin (Figure 3.12).

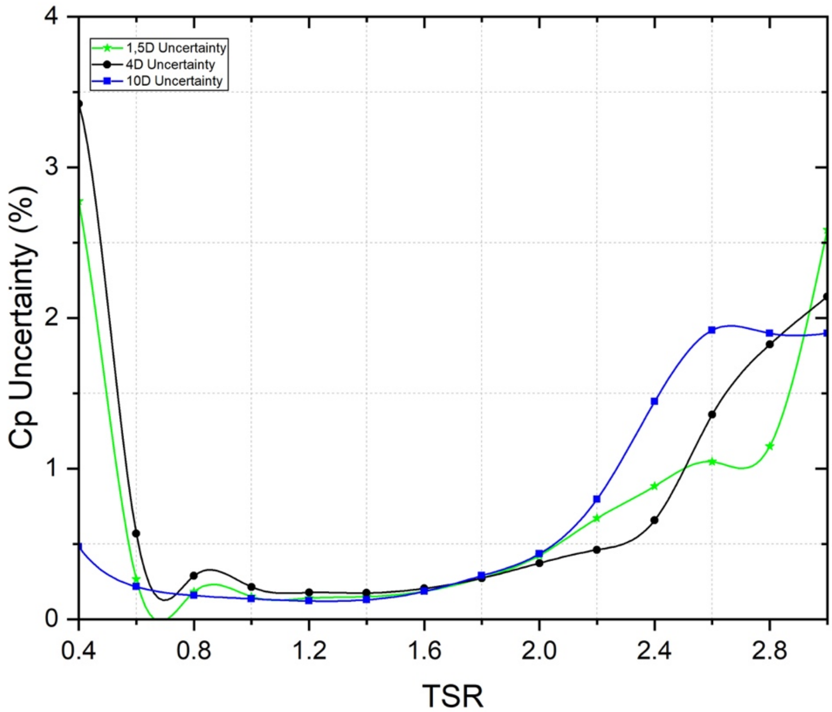

Figure 3.12 Uncertainty of the power coefficient for each configuration as a function of TSR.

Tip speed ratio measurements also include uncertainties calculated by Equation 3.13, then given in Figure 3.13.

$$\Delta TSR = \left|\frac{\omega \cdot r}{v}\right| \cdot \sqrt{\left(\frac{\Delta\omega}{\omega}\right)^2 + \left(\frac{\Delta v}{v}\right)^2} \tag{3.13}$$

$$\Delta TSR = \left|\frac{\omega \cdot r}{v}\right| \cdot \sqrt{\left(\frac{0.0025\omega}{\omega}\right)^2 + \left(\frac{0.01v}{v}\right)^2}$$

$$\Delta TSR = \left|\frac{\omega \cdot r}{v}\right| \cdot 0.0103$$

$$\Delta TSR = TSR \cdot 1.03\%$$

$$TSR_{mean} = \frac{\sum_{i=1}^{N}(TSR_1, TSR_2, TSR_3, \dots, TSR_N)}{N} \tag{3.14}$$

$$\Delta TSR_{mean} = \frac{1}{N}\sqrt{\sum_{i=1}^{N}(\Delta TSR_1{}^2, \Delta TSR_2{}^2, \dots, \Delta TSR_N{}^2)}$$

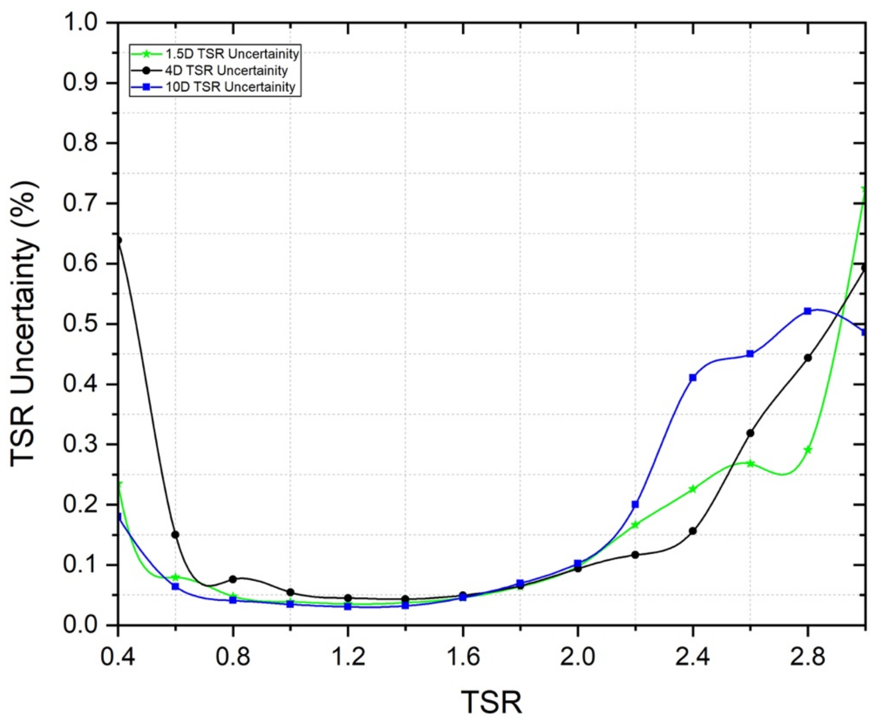

Figure 3.13 Uncertainty of the tip speed ratio for each configuration as a function of TSR.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Literature analysis

Considering 19 articles from 18 independent scientific groups (articles having non-overlapping co-authors are assumed as independent scientific groups), which include data for power coefficient change by H-Darrieus type VAWT pair interaction, 196 reduced and normalized data points are employed for this study. By using 114 data points, a normalized power coefficient map (Figure 4.1) is created to investigate the effect of the secondary turbine on the performance of the primary turbine as a function of the distance between the turbines (D) and azimuthal position (α). The location of the PT is given at the center of the normalized power coefficient map. Black points on the normalized power coefficient map represent the azimuthal position of the ST.

The normalized power coefficient of the PT is given within the range of ±20%. A colour scale ranging from red to blue is used to create a normalized power coefficient map in which red colours represent the increased power zone (IPZ) while blue colours represent the decreased power zone (DPZ). A white zone occurs inherently, which represents an unaffected efficiency zone defined as the neutral zone (NZ). Linear interpolation is performed to generate a data set for the regions that have no data from the literature. Colour scale is saturated to the red and blue colours for the data above 20% and below -20%, respectively. The distance between the turbines is limited to 4D, which is the widely studied limit in the literature, and more remarkable data exist within this range.

Performance decrease of PT is observed when the ST is located on the prevailing wind direction because of the blockage effect on the incoming wind. This effect is seen within the range of -30° to +20° at 4D while there is a bottleneck as the turbines get closer until 2D and reach -60° +60° at the closest siting case.

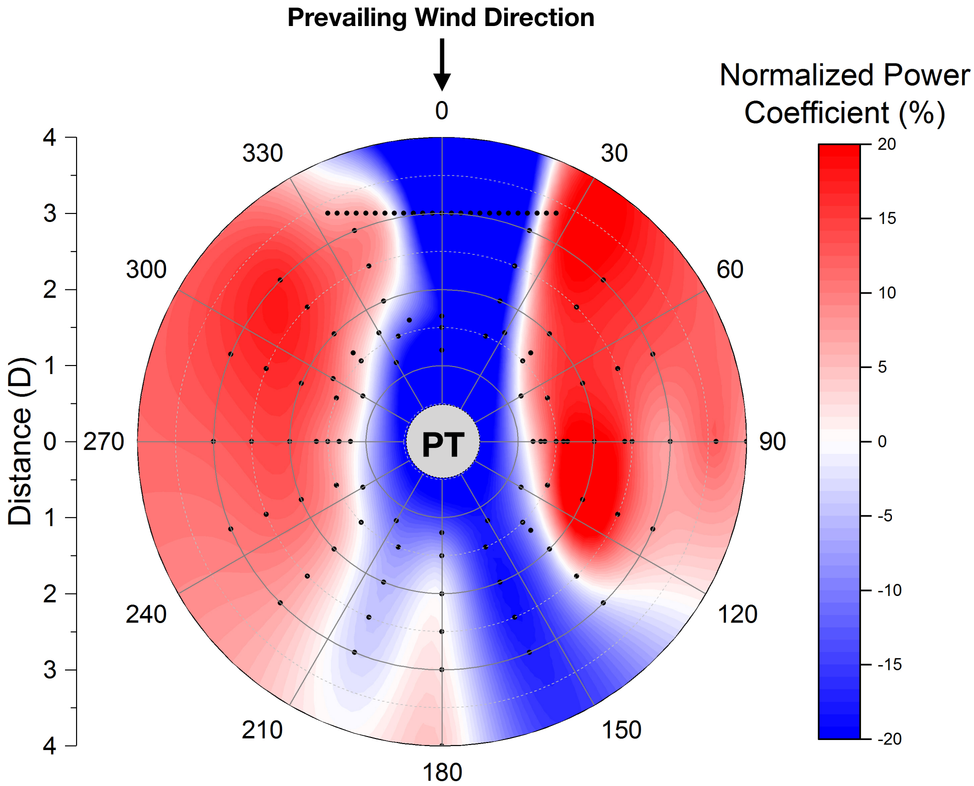

Figure 4.1 Normalised power coefficient (Cp_n) map of the primary turbine as a function of azimuthal position (α)

When the ST is located on the downwind side, the increased blockage effect decreases the available wind energy on the PT, causing a decreased performance. This effect is observed asymmetrically, resulting in a performance drop between -120° +120° at the closest siting case, having a bottleneck at 2.5D (between -135° +135°). As the turbines get farther, DPZ is separated along the prevailing wind direction due to the shifted wake of the PT caused by the rotating direction of the rotor. The rotation direction also causes a slight performance increase, which is observed behind of the PT when the distance between turbines is more than 3D. However, ST would have a dramatic performance decrease, as it is located inside the wake of the PT. Therefore, overall turbine pair performance would be lower than the performance of two-stand-alone turbine operations. On the other hand, energy enhancement is observed when the ST is positioned in the region from 30° to 120°. Symmetrically, the region from 240°

to 330° is also suitable for ST to create energy enhancement at the PT. Studied turbines have different rotational directions and distances, as a result of the variety in the literature, the performance variance map is not symmetric over the axes.

Another remarkable issue is observed as the energy enhancement after 1.5D distances of ST at all directions except prevailing wind direction while that close proximity creates dramatic performance losses for HAWTs.

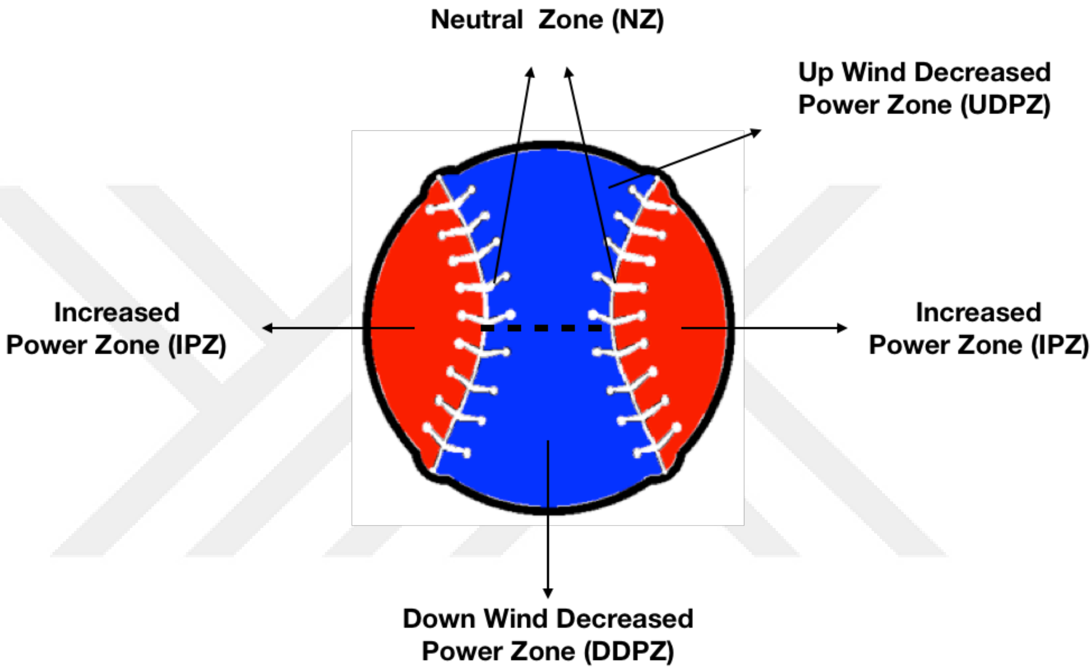

Figure 4.2 Generalized baseball-shaped schematic view of energy interaction of VAWTs working in pairs.

Complex flow structures occurring along the wake of a VAWT reduce the available energy content of the wind dramatically. Which results in an unsuitable field at the downwind side for turbine operation. This effect is seen as a blue region at the upwind side of the primary turbine. When the secondary turbine is located at the downwind side along the prevailing wind direction the increased blockage effect decreases the available wind energy on the PT and causes a decreased performance. This effect is seen as a blue region at the downwind side of the PT. However, when a secondary VAWT is positioned out of these zones, the PT performance is increased. This general representation of the performance change of the primary turbine is given by the baseball-shaped schematic view in Figure 4.2.

4.2 Experimental results

The scatter plot given in Figure 4.3 provides insight into the relationship between the power coefficient and TSR. Table 4.1 presents the mean value of Cps for three different proximities, for the 0.2 TSR increment. The curve plot in Figure 4.3 is plotted by data that represent mean Cp values for three different proximities.

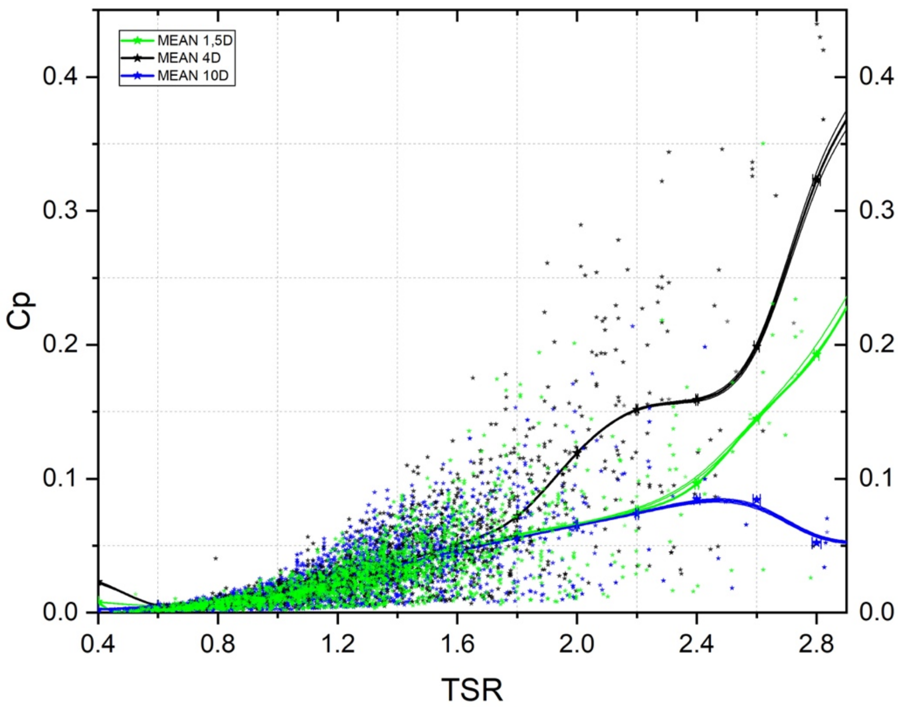

Figure 4.3 Power coefficient (Cp) of the turbines as a function of tip speed ratio (TSR) for different proximities.

The power coefficients (Cp) of the three different pair configurations are given on Table 4.1 and shown in Figure 4.4 as a function of the tip speed ratio (TSR). CP_p and CP_s of each proximity are shown by thin lines, while CP_{mean} values are represented by thick line. The 10D configuration represents the stand-alone condition, while the 4D and 1.5D configurations represent close proximities. The Cp values are in good agreement within the range from 0.6TSR to 1.2TSR for all proximities, and the efficiency of the turbines for the stand-alone condition and 4D proximity intersect by 2.545% at 1.2TSR. The efficiency of the 4D proximity configuration increases as TSR increased beyond 1.2TSR. Similarly, the power coefficient of the 1.5D proximity configuration is in harmony with the power coefficient of the stand-alone configuration until 1.6TSR, beyond where the separation is observed, with Cp being around 4.6%. The turbines located in the 1.5D proximity have higher efficiency for TSR values above 1.6. These results indicate that the proximity of turbines has a significant impact on their performance, particularly at higher TSR values (Figure 4.4). All the data used in the Figure 4.4 can be found in Appendix 1.

Table 1.1 Power coefficient of VAWTs for different proximities as a function of tip speed ratio

TSR	Cp - Stand Alone [%]	Cp - 4D [%]	Cp - 1,5D [%]
0.2	0.1263	2.9216	9.3572
0.4	0.2151	2.2740	0.8040
0.6	0.4521	0.5236	0.3984
0.8	0.8061	0.8365	0.7110
1	1.5219	1.5505	1.3396
1.2	2.5488	2.5467	2.2610
1.4	3.5624	3.6990	3.4056
1.6	4.6076	5.1224	4.5829
1.8	5.5937	7.1930	5.8052
2	6.5115	11.9157	6.6176
2.2	7.3756	15.1526	7.5857
2.4	8.4753	15.8871	9.6280
2.6	8.4209	19.8676	14.4726
2.8	5.2045	32.3023	19.2712

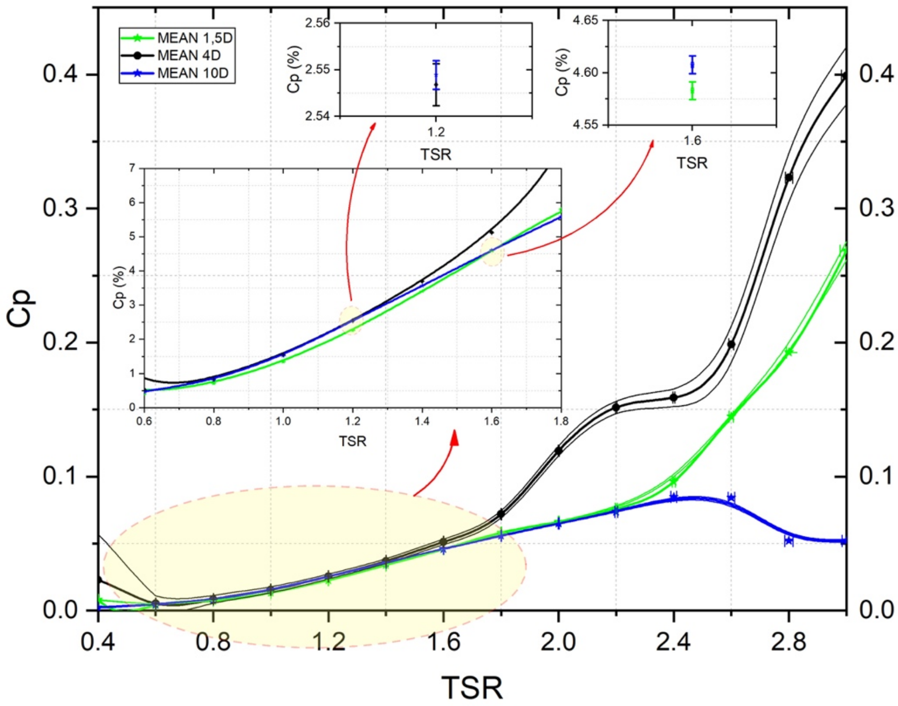

Figure 4.4 Power coefficient of VAWTs for different proximities as a function of tip speed ratio

As it's seen on Figure 4.4 1.5D and 4D configurations have similar separation behavior from stand-alone configurations within a phase difference as conforming to the previous studies in the literature. The power coefficient of stand-alone configuration is decreased by the increasing of TSR after 2.5 while the power coefficient of close proximity configuration is increased.

At 2.5TSR, power coefficients are 0.2 and 0.14 for 4D and 1.5D proximities, respectively, while stand-alone configuration has 0.08 only, which presents 75% and 125% power performance enhancement for 1.5D and 4D proximities, respectively (Figure 4.4).

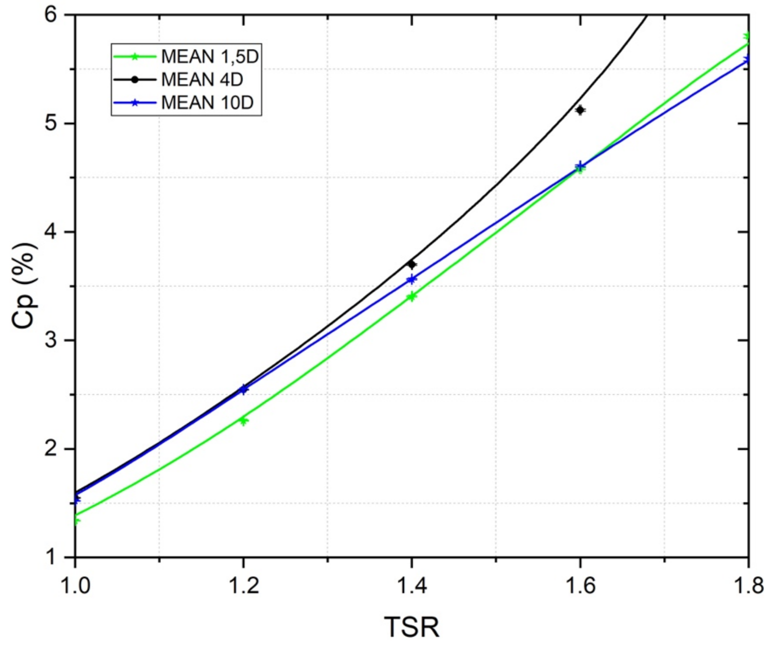

Figure 4.5 Power coefficient separation of VAWTs for 1.5D and 4D proximities as a function of tip speed ratio between 1.0 TSR and 1.8 TSR

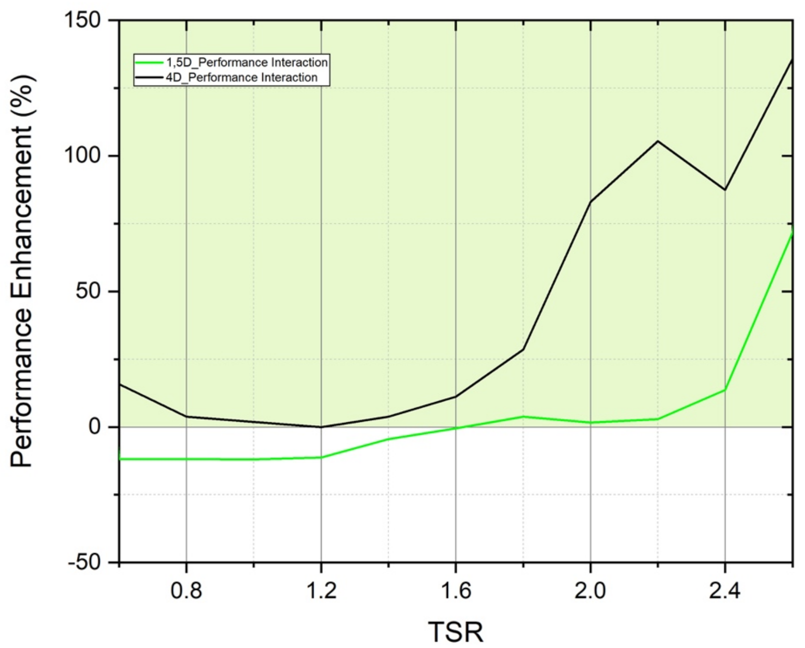

Figure 4.6 Performance enhancement of close proximity configurations of 4D and 1.5D against the stand-alone configuration

Results are not available beyond 3TSR for this study because of the difficulties of gathering valid data from the experimental setup. However, the studied range of TSR is able to show differences between stand-alone configurations and turbine pair. One can claim that the close proximity of VAWTs has increased the power coefficient for the operating condition of 1.2TSR and more. The results of experiments are in good harmony with the studies given in Figure 4.6 as power enhancement is observed under real-site conditions for different proximity configurations. Overall, the results of this study provide valuable insights into the performance of VAWTs in close proximity and have important implications for the design and operation of wind farms includes VAWTs.

4.3 Power coefficient enhancement mechanism

Academic studies have investigated the energy enhancement mechanism of VAWTs working in pairs by using various methods. The second chapter of this thesis provides an in-depth analysis of this topic, revealing that numerous publications in the field have confirmed the mutually beneficial impact of closely located vertical axis wind turbines on each other's power coefficient. This phenomenon is believed to be driven by the hypothesis that the nearby turbines accelerate the flow around the downstream turbine, thereby enhancing the power coefficient.

It has been observed that turbines working at higher TSR experience less flow leakage than those working at lower TSR, which causes an increased flow area around the rotor. The experiment results, as shown in Figure 4.4, Figure 4.5, and Figure 4.6, indicate that in every TSR situation where the wind turbine pairs were positioned at a 4D distance from each other, they demonstrated higher performance compared to independent operation. This separation became more evident at 1.2 TSR and above. However, the enhancement effect of the increased flow field occurred between turbines positioned at a distance of 1.5D could only be observed at 1.8TSR and above.

The experimental results show that the accelerated flow occurring around the rotors during the operation of turbine pairs is reflected in the cumulative power coefficient increase, thereby contributing positively to the overall performance.

4.4 Comparison the results between literature

Based on the field data results available in the literature (Dabiri (2011) and Brownstein et al., (2016)), Figure 4.7 shows the results obtained in this study. Upon examination of these results, it can be concluded that the limited field data studies in the literature are consistent for turbine pairs in similar proximity and for the location at the 90° azimuth angle, which is within the scope of this thesis.

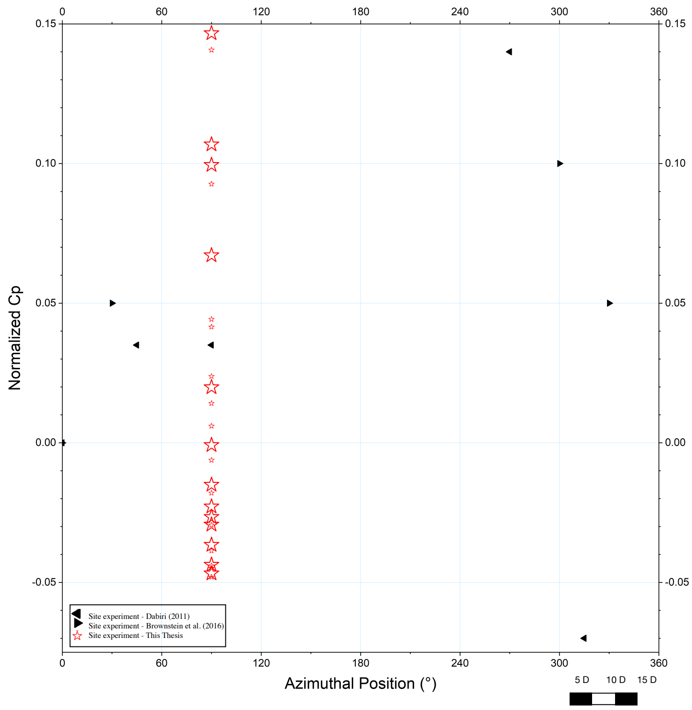

Figure 4.7 Normalized power coefficient comparison of primary turbine as a function of azimuthal position for site experiment studies in the literature

Figure 4.8 extends the discussion on the literature considering the data on a wider range for normalized power coefficient and distance between turbines, methodology, independent scientific groups, and results of this study. All of the 196 data points are employed in Figure 4.8 to understand the effects of the parameters on the normalized power coefficient. All the parameters are coloured and symbolized to distinguish their individual effects. Results are represented by circle, triangle and diamond symbols for the numerical studies, experimental site studies and experimental wind tunnel studies, respectively. Besides the results of the literature, site experiment results of this study are also implemented on the figure by the symbol of a star. Each symbol has its own size, which represents the distance between the primary and secondary turbine, while colours of the symbols represent independent scientific groups of the corresponding study. In other words, independent scientific groups are presented by the same colour while same-distanced pairs are presented in identical symbol sizes.

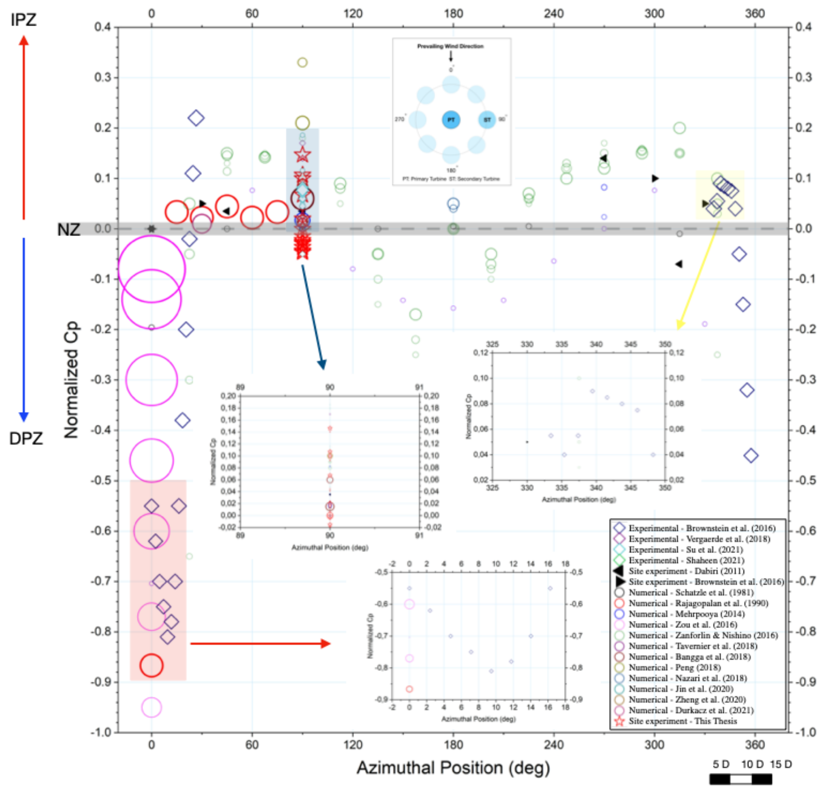

Figure 4.8 Normalized power coefficient of primary turbine as a function of azimuthal position, study method and independent scientific groups

At a first glance, Figure 4.8 seems to be confusing due to the scattered data, which is the result of a wider parameter range i.e. distance between turbines and normalized power coefficient. Besides, there are several other differences between the studies like methodology, turbine model, environmental and/or operational conditions, which increases the complexity of the data handling. However, from a more comprehensive perspective, one can see harmony in the data represented by a double-peak behavior as the general distribution of normalized power coefficient with respect to azimuthal position. The first peak arises around the 90° while the second one arises around 330°.

Besides, there are also 3 minima appearing in Figure 4.7, which are positioned around 0°, 180°, and 360°. Although there are 3 different DPZ in Figure 20, 0° and 360° physically represent the same region. Therefore, there are only 2 different DPZs around the PT, which are named as UDPZ (0° and 360°) and DDPZ (180°) as previously shown in Figure 4.1 and Figure 4.2.

Although Figure 4.8 includes the results of different cases in a harmony, a close-up look at the data reveals many discrepancies. To investigate the important discrepancies, different sub-regions are defined in Figure 4.8, namely red region, blue region, and yellow region that are focused on the decreased part of UPDZ, the increased part of IPZ and the increased part of UPDZ, respectively.

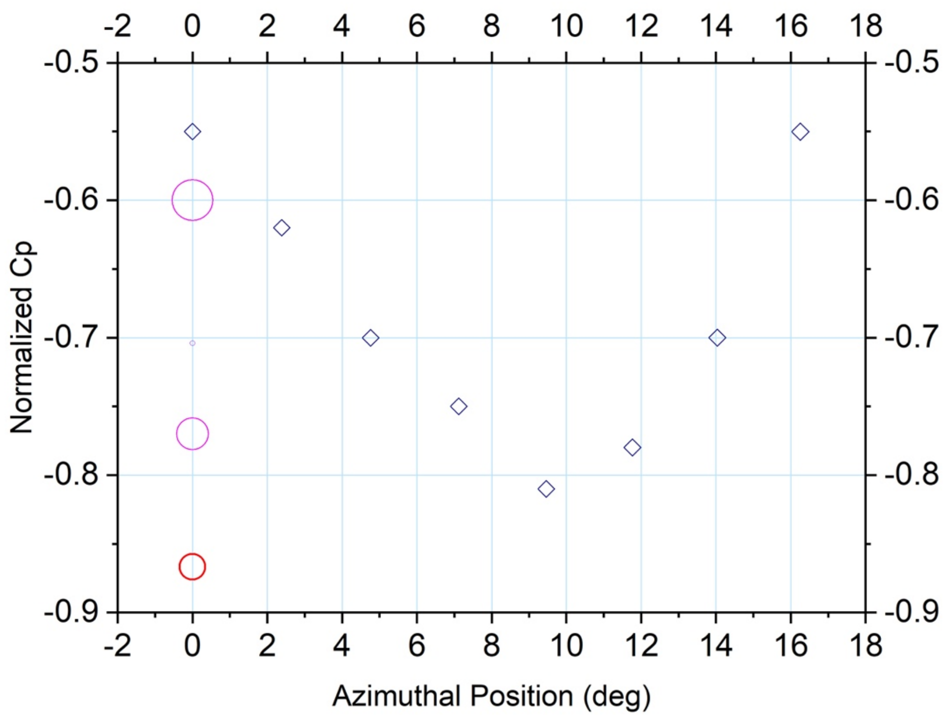

Figure 4.9 Red region in Figure 4.8, a close look-up to the region that has normalized power coefficient from -90% to -50% as a function of azimuthal position from -2° to 18°

The upside-down conical shape in the DPZ, which is clearly seen in Figure 4.8 as a vertically in-line set of data along 0° is worth investigating in more detail. The study of Brownstein et al. (2016) aims to investigate the wake effect of an upstream VAWT (ST) to the performance of a downstream VAWT (PT) Zuo et al. (2016) show that normalized power coefficient decreases as ST gets closer to the PT. This result is in good agreement with Tavernier et al. (2018) and Brownstein et al. (2016) studied for the same azimuthal position, as given in Figure 4.8. However, a focused eye to the experimental tunnel study results would observe more detailed information for the increased azimuthal position. Therefore the red region (Figure 4.8) is given in detail in Figure 4.9, zooming into the region that has an azimuthal position from 0° to 18° with a normalized power coefficient from -90% to -55%. This region includes both numerical studies and an experimental tunnel study for the normalized distances between turbines from 1.2D to 9D. All results performed by different scientific groups are seen as vertically in-line along 0° show that the normalized power coefficient decreases up to -86% with decreasing distance between the turbines. Regarding to results of wind tunnel experiments performed by Brownstein et al., the normalized power coefficient decreases with increasing azimuthal position up to 9.4°, and increases with increasing azimuthal position. Thus, a certain V shape behaviour is observed for the turbines located between 0° and 18° azimuthal position, and the lowest value of -81% normalized power coefficient was observed at 9.4°. Due to the wake of the rotor caused by the rotational direction, the lowest normalized power coefficient value reveals at 9.4°, instead of the expected azimuthal position of 0°. Shifted minima for VAWTs' normalized power coefficient is related with the direction of rotation of the turbine and is one of the most important issue for not only locating VAWTs in pairs but also siting them in large scales.

Beyond the red region, the normalized power coefficient of the wind tunnel experiment increases up to 22% with increasing azimuthal position up to 30° while the normalized power coefficient of a numerical study performed by Rajagopalan et al. (1990) increases up to 4% only. This limited increment of normalized power coefficient reported by Rajagopalan et al. (1990) is also in good agreement with the site experiment of Brownstein et al. (2016) and Zanforlin and Nishino (2016). Results are getting more scattered as the azimuthal position increases up to 90° and that region includes both site experiments and numerical analysis. While the results of Dabiri (2011) and Rajagopalan et al. (1990) agreed on the normalized power coefficient of 4% - 6%, Zanforlin & Nishino (2016) reported an increase up to 15% for the same azimuthal region. Due to the disagreement between scattered results, this transition region that has an azimuthal position between 30° - 90° is worth studying extensively.

Furthermore, results of the side-by-side configuration can be observed from the 90° azimuthal position in Figure 4.8 where the turbines are aligned normally to the prevailing wind direction. Likewise, the azimuthal position of 270° represents the same physical position by only replacing the PT with the ST. All of the studies included in this study presented a result in this particular configuration and an increased normalized power coefficient is reported by all studies. Besides, all types of studies (numerical, experimental tunnel, and experimental site) are in good agreement that the normalized power coefficient can be increased up to 34%, however, most of the results are concentrated in a narrow range up to 15%. Therefore, a blue region is defined on Figure 4.8 to examine the region closely that has an azimuthal position of 90° for the normalized distances between turbines from 1.2D to 9D, and with a normalized power coefficient in the range of 0% - 20%. This region (Figure 4.10) includes the results of numerical studies, a tunnel experiment, and a site experiment, which were done by 9 different scientific groups included this study. The most remarkable result of the blue region is; the increased performance of VAWTs in such a close proximity which is not possible for HAWTs. Moreover, as the performance of the ST can be obtained by switching the turbines, the overall pair performance can be increased by positioning the primary and secondary turbine at the 90° and 270°, respectively, and vice versa.

Further increase of the azimuthal angle results a V-shaped tendency of normalized power coefficient (Figure 4.8) in the range of 90° to 270°, which refers to positions where the ST is behind the PT according to the prevailing wind direction. This V-shaped tendency is reported by Dabiri (2011), Zanforlin and Nishino (2016), and Vergaerde et al. (2018), including both numerical studies and a site experiment. The observed minimum of the V-Shaped tendency is down to -25%. Regarding the studies that reported a minimum, normalized power coefficient decreases with increasing azimuthal position up to 180° where the ST is located exactly behind the PT and blocks the free stream. Then the normalized power coefficient increases again when the turbines become staggered by increasing the azimuthal position up to 270°. While the azimuthal position changes from 180° to 270°, the normalized power coefficient changes from -25% to 20% respectively, in other words, the azimuthal position of ST covers the range of DDPZ and IPZ (Figure 4.8). On the other hand, Schatzle et al. (1981), and Nazari et al. (2018) reported slightly increased normalized power coefficients for the same region.

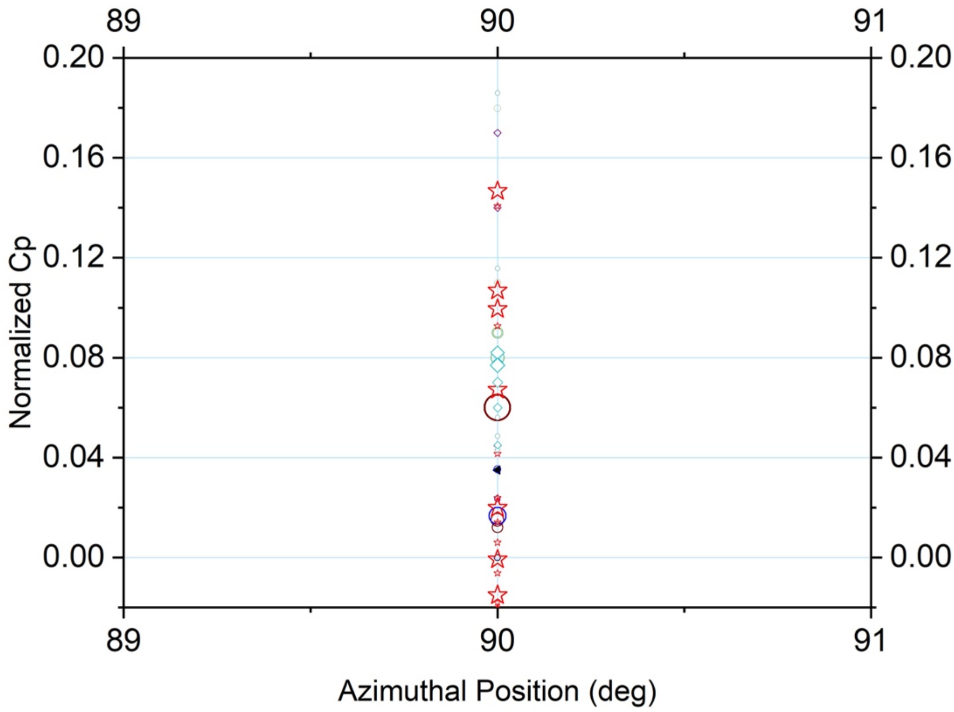

Figure 4.10 Blue region in Figure 4.8, a close look-up to region that has normalized power coefficient from -2% to 20% as a function of azimuthal position from 89° to 91°

Results of a numerical study, a wind tunnel experiment, and a site experiment are overlapped on Figure 4.8, which is defined as a yellow region. This region is expanded on Figure 4.10 to extend the discussion and it is observed that as the azimuthal position changes between 325° and 350° the normalized power coefficient is in the range of 2% to 12%. The results of the wind tunnel experiment are coherent with the result of the site experiment, which has 5% normalized power coefficient at the azimuthal position of 330° and the result of the numerical study, which has 5% of normalized power coefficient at the azimuthal position of 337°. Besides, higher normalized power coefficients are observed when the azimuthal position is increased, both the results of the numerical study and wind tunnel experiment reach their local peaks of 10% and 9%, respectively.

As the turbines aligned, the normalized power coefficient decreases dramatically (Figure 4.11). From another point of view, yellow region can be assumed as the origin of the red region due to the similarity of the physical location of the ST along the prevailing wind direction axis. However, the results of the wind tunnel experiments are not symmetric to the prevailing wind direction axis due to the rotational direction of the turbine. Even though effects of the rotational direction of the VAWTs on the overall performance of the pairs are not within the scope of this study, it is worth studying deeply.

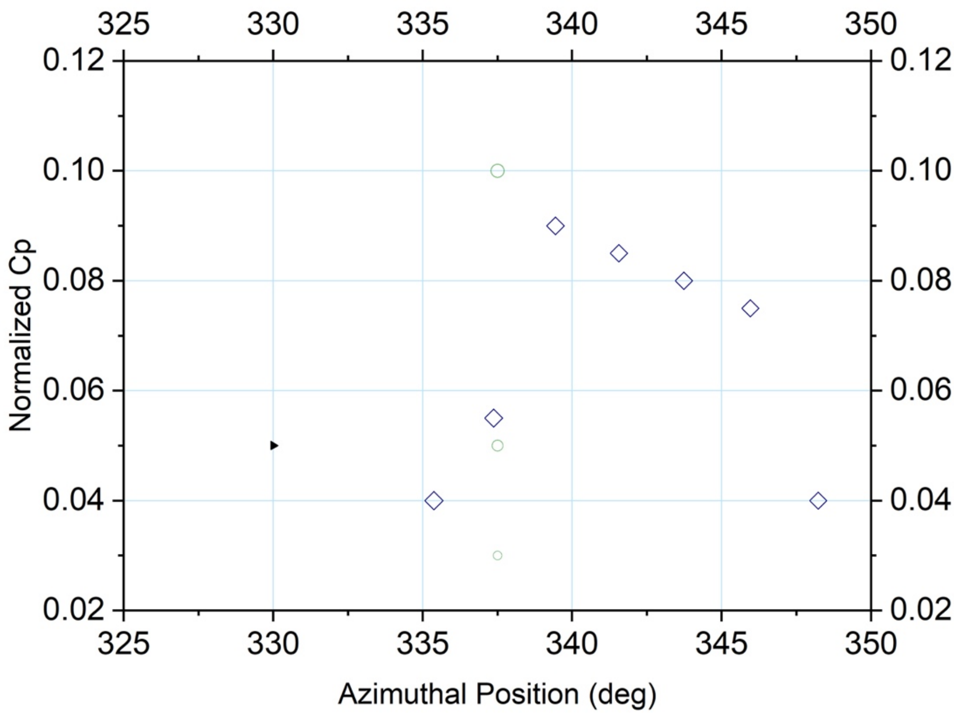

Figure 4.11 Yellow region in Figure 4.8, a close look-up to region that has normalized power coefficient from 2% to 12% as a function of azimuthal position from 325° to 350°

CHAPTER FIVE
CONCLUSION

There is an increasing interest on vertical axis wind turbines in the literature since the early 2000s. This research aimed to investigate deeply all the articles in the literature that are related to the energy interaction of vertical axis wind turbines working in pairs and present the generalized energy interaction behaviour of such turbines. Moreover, for the first time, three different proximities of VAWT have been assessed to investigate the energy interaction of VAWT pair at a near-shore experiment site under the real site circumstance.

The energy interaction of VAWTs working in a pair is studied by different methods such as numerical simulations, experimental studies in wind tunnels or on-site. Researchers not only used different methodologies to investigate the interaction of turbines but also examined the performance change in different methods. One of the biggest challenges in the literature is to compare all the results with a holistic view. Therefore this study has realized such an exhausting effort.

The general distribution of the normalized power coefficient of the primary turbine with respect to the relative position of the secondary turbine shows double-peak behaviour. Increased power zone, decreased power zone, and neutral zone were identified as a function of the location of the secondary turbine in which the power coefficient of the primary turbine is increased, decreased, or stayed stable, respectively. The important discrepancies and/or harmonies were also analyzed by defining different sub-regions for a close-up look to the generalized results.

In addition, a coloured and normalized power coefficient map of the primary turbine was generated to visualize the effect of the existence of the secondary turbine within 4D distance from the primary turbine. A *baseball shape analogy* is derived from the coloured and normalized power coefficient map to generalize the presentation of the energy interaction of vertical axis wind turbines working in pairs. Different than the HAWTs, the site performance of a VAWT pair depends on both the distance between the turbines and azimuthal position. This data provided in this study is valuable to generalize the VAWT pair’s behaviour and to obtain an understanding of the in-site behaviour of such a turbine combination. The generalized data provided in this study can be used to develop a dedicated methodology for wind resource assessment processes of VAWTs in pairs.

The second chapter of the present study investigates the energy interaction of VAWTs in three different proximity configurations under real-site conditions at a near-shore experimental site for the first time in the literature. Firstly, the performance of VAWTs in the stand-alone condition is investigated, which is accepted as the basis for comparison with the upcoming close proximity experiments. Results show that 4D and 1.5D proximities cause power enhancements of 125% and 75%, respectively, for the TSR of 2.4. Moreover, the 4D proximity configuration shows a higher power performance coefficient for all TSRs, while the 1.5D proximity configuration shows enhanced performance for TSRs of 1.6 and above.

To assess the uncertainty of the results, an uncertainty analysis is carried out in this study, and the uncertainty of the performance coefficient is observed to be up to 3% for the extreme TSR values due to including relatively less valid data in the related bin, while remaining below 1% for the TSR range of 0.6 to 2.4, where more data is available. The lack of experimental results related to real-site conditions in the literature underscores the importance and contribution of the present study. The results supply valuable basis and encourage future investigations of the energy interaction of VAWTs.

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APPENDIX 1. MEAN CP & TSR DATA

Mean_TSR_10D_Proximity	Mean_CP_10D_Proximity	Mean_TSR_4D_Proximity	Mean_CP_4D_Proximity	Mean_TSR_1.5D_Proximity	Mean_CP_1.5D_Proximity
Unit: NA	Unit: %	Unit: NA	Unit: %	Unit: NA	Unit: %
0,18829	0,12625	0,24218	2,92168	0,39157	0,05058
0,14746	0,06001	0,18348	1,49784	0,39157	0,05058
0,09467	0,12705	0,30087	4,34551	0,21659	18,66383
0,28108	0,11775	0,30087	4,34551	0,21659	18,66383
0,09306	0,11271	0,30087	4,34551	0,55940	0,22773
0,32516	0,21371	0,55794	0,20265	0,39157	0,05058
0,18829	0,12625	0,55043	0,25536	0,54345	0,36192
0,14746	0,06001	0,56544	0,14993	0,58973	0,44769
0,09467	0,12705	0,71514	0,62425	0,54732	0,16986
0,28108	0,11775	0,79333	4,03133	0,59970	0,12623
0,09306	0,11271	0,79333	1,23599	0,50698	0,08239
0,32516	0,21371	0,68000	0,31618	0,58568	0,18513
0,54593	0,27287	0,78360	1,02633	0,56402	0,17769
0,57075	0,50842	0,76363	0,40447	0,58949	0,37788
0,48922	0,19802	0,75534	0,59751	0,53557	0,14980
0,53300	0,25608	0,75534	0,57124	0,51927	0,13087
0,54676	0,31877	0,61156	0,20776	0,59572	0,27181
0,56879	0,38129	0,78302	0,88441	0,58178	0,17886
0,54593	0,27287	0,67116	0,45602	0,59737	0,19644
0,57075	0,50842	0,78302	1,43486	0,55221	0,28477
0,48922	0,19802	0,67116	0,64488	0,58145	0,17856
0,53300	0,25608	0,62087	0,29536	0,54147	0,15464
0,54676	0,31877	0,62087	0,35370	0,54923	0,26126
0,56879	0,38129	0,72435	0,79492	0,59913	0,25381
0,56443	0,14439	0,62087	0,61260	0,57094	0,37429
0,49795	0,12028	0,72435	0,89702	0,56733	0,25874
0,58785	0,32499	0,67646	0,69800	0,59737	0,33675
0,53987	0,28049	0,78920	0,47162	0,52560	1,38035
0,47093	0,18423	0,76022	0,26106	0,46989	0,06481
0,57394	0,33175	0,63351	0,23763	0,52697	0,08918
0,54542	0,12065	0,76022	0,25772	0,58973	0,25189
0,52447	0,23808	0,67853	0,43313	0,59970	0,31662
0,44237	0,12069	0,79162	0,81866	0,48903	0,07662
0,51952	0,22063	0,63042	0,25576	0,58052	0,12221
0,59071	0,26066	0,63042	0,59550	0,59572	0,20690
0,49656	0,19868	0,73804	0,21438	0,52697	0,08249
0,48719	0,17971	0,73804	0,26950	0,53262	0,15424
0,55102	0,33709	0,61469	0,26186	0,53262	0,08518
0,59849	0,30376	0,70863	0,81324	0,58052	0,11476
0,49095	0,30376	0,64300	0,13569	0,53602	0,14394
0,52396	0,21369	0,74856	0,69558	0,59572	0,19777
0,56801	0,31831	0,65499	0,63896	0,21659	18,66383
0,45563	0,23907	0,77427	0,53040	0,51142	0,13476
0,57644	0,35895	0,75716	0,26124	0,69255	0,43726
0,59568	0,36727	0,75716	0,49602	0,61479	0,54847
0,58340	0,47194	0,75203	0,20088	0,54345	0,36192
0,56217	0,24768	0,72487	0,30584	0,58973	0,44769
0,59434	0,29748	0,77265	0,72864	0,54732	0,16986
0,52572	0,22580	0,69319	0,42299	0,59970	0,12623
0,56861	0,38655	0,77459	0,75410	0,73354	0,42764
0,59897	0,45182	0,68506	0,54374	0,67728	0,42923
0,56965	0,28727	0,75068	0,33969	0,50698	0,08239
0,57901	0,21590	0,75534	0,54498	0,68083	0,61056
0,54608	0,25295	0,75534	0,49902	0,58568	0,18513
0,56217	0,10151	0,75534	0,65003	0,65280	0,44504
0,56470	0,36764	0,78302	0,94429	0,56402	0,17769
0,50306	0,20781	0,67116	0,43529	0,79045	0,98992
0,58648	0,34116	0,64217	0,43195	0,58949	0,37788
0,54692	0,15703	0,64217	0,52723	0,79894	0,80805
0,59164	0,44211	0,55043	0,25536	0,53557	0,14980
0,53634	0,17630	0,62087	0,30995	0,51927	0,13087
0,51628	0,15733	0,62087	0,15680	0,59572	0,27181
0,57075	0,26402	0,62087	0,13309	0,73231	0,61844
0,56879	0,11214	0,63275	0,30626	0,69427	0,45755
0,56861	0,17367	0,70932	0,32416	0,64880	0,59614
0,50220	0,12152	0,79162	0,64256	0,58178	0,17886
0,56839	0,24314	0,56544	0,14993	0,70125	0,30998
0,51628	0,15733	0,71714	0,47242	0,74990	0,64375
0,57075	0,26402	0,65504	0,45879	0,75203	1,08119
0,56879	0,11214	0,74904	0,43540	0,70545	0,54559
0,56861	0,17367	0,67728	0,29510	0,70545	0,21930
0,50220	0,12152	0,79888	0,57678	0,65190	0,51495
0,56839	0,24314	0,61180	0,13781	0,71427	0,48858
0,55102	0,16052	0,71377	0,35239	0,75823	0,91309
0,53630	0,24272	0,71775	0,34559	0,59737	0,19644
0,57821	0,21500	0,68945	0,35452	0,66653	0,35191
0,58340	0,11647	0,75203	0,46656	0,62313	0,42025
0,58340	0,11193	0,83285	0,91419	0,73145	0,35546
0,28108	0,11775	0,98615	1,51825	0,60978	0,20296
0,40668	0,17466	0,96389	1,18575	0,55221	0,28477
0,56861	0,18487	0,98689	1,93307	0,73887	0,96191

0,49914	0,10150	0,93939	1,55097	0,74149	0,88045
0,57901	0,08872	0,80519	0,72776	0,68506	0,40168
0,32516	0,21371	0,79333	4,03133	0,74225	0,56698
0,46847	0,10286	0,79333	1,23599	0,61855	0,22430
0,50306	0,33517	0,68000	0,31618	0,78315	0,47421
0,55817	0,11526	0,82619	1,20293	0,62038	0,23573
0,57451	0,10689	0,88947	1,16719	0,74666	0,79200
0,44695	0,08580	0,91420	1,74109	0,63053	0,16757
0,53634	0,07287	0,78360	1,02633	0,74904	0,48663
0,67996	0,51430	0,90082	1,13600	0,74904	0,23371
0,78334	0,12813	0,90082	1,55921	0,65802	0,67250
0,73383	0,97224	0,91636	0,50999	0,69594	0,47761
0,57075	0,50842	0,76363	0,40447	0,58145	0,17856
0,48922	0,19802	0,86466	1,51679	0,69774	0,42440
0,53300	0,25608	0,88123	0,32502	0,69878	0,46788
0,67996	0,51430	0,75534	0,59751	0,69904	0,20297
0,78334	0,12813	0,75534	0,57124	0,54147	0,15464
0,73383	0,97224	0,85619	1,10803	0,64976	0,17136
0,57075	0,50842	0,61156	0,20776	0,76047	0,78621
0,48922	0,19802	0,78302	0,88441	0,65190	0,48118
0,53300	0,25608	0,67116	0,45602	0,76160	0,64848
0,72923	0,15952	0,78302	1,43486	0,63467	0,23220
0,54676	0,31877	0,67116	0,64488	0,70545	0,23268
0,77260	0,64029	0,82565	1,28060	0,54923	0,26126
0,75838	0,92239	0,62087	0,29536	0,71917	0,34570
0,56879	0,38129	0,62087	0,35370	0,74127	0,67416
0,78470	0,78811	0,72435	0,79492	0,73174	0,23281
0,74548	0,67226	0,82782	1,82322	0,79400	0,64826
0,74548	0,49867	0,62087	0,61260	0,79450	0,28654
0,74548	0,51761	0,82782	0,45945	0,64675	0,32150
0,69705	0,27642	0,93130	1,14863	0,64976	0,15673
0,77268	0,28115	0,82782	1,04835	0,70545	0,19256
0,72933	0,22461	0,72435	0,89702	0,76160	0,49806
0,74696	0,26034	0,98065	1,80970	0,77762	0,83466
0,62247	0,23494	0,92281	1,98006	0,71685	0,24414
0,74889	0,61656	0,80746	1,31835	0,67768	0,18730
0,64191	0,29418	0,90195	1,35828	0,71410	0,55005
0,74889	0,82611	0,67646	0,69800	0,70820	0,57045
0,70868	0,31860	0,78920	0,47162	0,60107	0,38214
0,71286	0,33381	0,90195	1,78274	0,59913	0,25381
0,79618	0,31143	0,99432	0,96011	0,57094	0,37429
0,76083	0,80522	0,90393	1,99799	0,68756	0,20800
0,79620	0,76275	0,99305	1,40941	0,68756	0,73294
0,68168	0,72185	0,85119	0,62954	0,78305	0,46772
0,68168	0,57140	0,76022	0,26106	0,75805	0,40124
0,68168	0,48782	0,63351	0,23763	0,72287	0,35304
0,56443	0,14439	0,76022	0,25772	0,74445	0,27659
0,73524	0,78177	0,90471	0,87102	0,76054	0,81885
0,49795	0,12028	0,90471	0,77821	0,69878	0,21314
0,79673	1,13126	0,67853	0,43313	0,69904	0,45799
0,75815	1,11763	0,90471	1,07569	0,72942	0,36272
0,66338	0,59523	0,79162	0,81866	0,75128	0,54915
0,78381	0,69950	0,94563	0,95433	0,73145	0,36061
0,78381	0,78926	0,84056	1,25972	0,72698	0,76492
0,58785	0,32499	0,84056	1,34370	0,72698	0,48660
0,74863	0,70852	0,63042	0,25576	0,77762	0,79405
0,71157	0,62580	0,63042	0,59550	0,67176	0,53345
0,71251	0,54561	0,86105	0,63701	0,56733	0,25874
0,70697	0,85056	0,86105	0,57576	0,77189	0,77779
0,62985	0,42194	0,73804	0,21438	0,72624	0,37934
0,53987	0,28049	0,73804	0,26950	0,68756	0,20305
0,75349	0,26810	0,86105	0,98307	0,78885	1,07700
0,75349	0,88267	0,98405	1,42408	0,70820	0,28055
0,65931	0,61869	0,61469	0,26186	0,69338	0,58663
0,47093	0,18423	0,99872	2,28587	0,65280	0,33060
0,57394	0,33175	0,94484	1,84064	0,79450	0,68006
0,74387	0,94394	0,70863	0,81324	0,66653	0,40154
0,54542	0,12065	0,93616	0,45001	0,78038	0,77518
0,52447	0,23808	0,64300	0,13569	0,72975	0,29975
0,44237	0,12069	0,91770	1,36768	0,71917	0,69707
0,51952	0,22063	0,81573	1,13043	0,64324	0,49050
0,59071	0,26066	0,90973	0,45311	0,75832	0,57110
0,49656	0,19868	0,90973	0,79151	0,75068	0,39537
0,75149	1,19833	0,90973	1,11843	0,69782	0,30865
0,73079	0,82456	0,83318	0,63199	0,75338	0,36025
0,64959	0,48099	0,74856	0,69558	0,76318	0,53739
0,48719	0,17971	0,65499	0,63896	0,61527	0,21770
0,70845	0,74481	0,88579	0,36532	0,79333	0,49448
0,62974	0,48638	0,90331	1,38612	0,66189	0,27821
0,55102	0,33709	0,77427	0,53040	0,62308	0,22928
0,61292	0,43808	0,88336	1,15077	0,66594	0,70195
0,70765	0,83509	0,75716	0,26124	0,66594	0,31948
0,59849	0,30376	0,75716	0,49602	0,71367	0,33495

0,49095	0,30376	0,99216	0,72154	0,70147	0,36098
0,78552	1,01877	0,97338	0,63934	0,59737	0,33675
0,61129	0,43833	0,97338	0,62529	0,72942	0,38826
0,52396	0,21369	0,97338	0,54801	0,73833	0,39247
0,75735	0,82091	0,84338	0,99501	0,71023	0,79694
0,56801	0,31831	0,87736	0,92339	0,71286	0,29089
0,64786	0,44745	0,75203	0,20088	0,66857	0,29110
0,74119	0,72666	0,87736	1,06271	0,72005	0,59957
0,77347	0,49352	0,72487	0,30584	0,79450	0,82524
0,77347	0,43007	0,86985	0,76210	0,75338	0,36588
0,77810	0,90842	0,86985	0,70193	0,75338	0,39965
0,72901	1,09576	0,77265	0,72864	0,79905	0,32647
0,63789	0,51675	0,92718	0,89866	0,71367	0,33974
0,45563	0,23907	0,98124	0,48941	0,77781	0,42743
0,71481	0,65881	0,85000	0,48505	0,79905	0,28760
0,61269	0,39949	0,94413	0,60265	0,77079	0,27210
0,66594	0,34648	0,94413	1,32711	0,72782	0,67325
0,66594	0,45897	0,94413	0,88474	0,75259	0,50962
0,77094	0,65384	0,85550	0,75884	0,69100	0,35971
0,67458	0,51247	0,93939	0,91865	0,46989	0,06481
0,57644	0,35895	0,77459	0,75410	0,52697	0,08918
0,61916	0,19684	0,90368	0,72224	0,63402	0,23843
0,71685	0,35359	0,97850	1,41515	0,58973	0,25189
0,71685	0,58931	0,68506	0,54374	0,63854	0,23731
0,70321	0,55631	0,88746	1,19610	0,59970	0,31662
0,76237	0,70885	0,95171	1,36169	0,48903	0,07662
0,68844	0,32314	0,96245	1,54849	0,58052	0,12221
0,59568	0,36727	0,96389	0,81198	0,76047	0,70184
0,77859	1,08683	0,96389	0,85064	0,59572	0,20690
0,72435	0,56155	0,80143	0,71760	0,70282	0,20628
0,76186	0,58552	0,80143	0,90582	0,65280	0,13351
0,65302	0,34791	0,75068	0,33969	0,75203	0,47020
0,77647	0,42521	0,90082	0,77961	0,52697	0,08249
0,78163	0,88886	0,90082	1,30306	0,73686	0,40290
0,77786	0,83195	0,91636	0,93791	0,53262	0,15424
0,58340	0,47194	0,91636	0,80895	0,76593	0,68765
0,65586	0,52785	0,91636	1,51238	0,64077	0,17417
0,56217	0,24768	0,88123	0,91596	0,69427	0,32430
0,60674	0,24109	0,75534	0,54498	0,74149	0,47167
0,79246	0,84767	0,75534	0,49902	0,70125	0,21279
0,69340	0,52459	0,75534	0,65003	0,65616	0,32527
0,59434	0,29748	0,97850	0,36433	0,65802	1,03335
0,72849	0,58396	0,85619	0,52993	0,70545	0,41721
0,65140	0,39249	0,85619	1,11406	0,70545	0,22198
0,52572	0,22580	0,89488	1,03181	0,76054	0,64158
0,75815	0,72127	0,78302	0,94429	0,53262	0,08518
0,56861	0,38655	0,67116	0,43529	0,71427	0,18599
0,69880	0,48128	0,64217	0,43195	0,67398	0,36406
0,59897	0,45182	0,64217	0,52723	0,77762	0,34740
0,56965	0,28727	0,82782	0,23155	0,58052	0,11476
0,61660	0,26789	0,93130	2,24620	0,60036	0,20762
0,72764	0,41089	0,82782	0,94807	0,73145	0,31425
0,75902	0,39719	0,93130	0,52144	0,62738	0,13356
0,76812	0,78748	0,93130	0,93349	0,73887	0,38373
0,68266	0,28478	0,82782	0,80222	0,74149	0,43237
0,68357	0,68133	0,62087	0,30995	0,79924	0,48495
0,57901	0,21590	0,62087	0,15680	0,74225	0,54206
0,60766	0,66663	0,62087	0,13309	0,70483	0,44892
0,65032	0,57827	0,93130	0,25343	0,68756	0,35162
0,68725	0,50074	0,84056	0,57910	0,74666	0,71440
0,74609	0,52600	0,98065	1,57444	0,74904	0,22731
0,74609	0,59773	0,84056	0,61530	0,74904	0,42900
0,63951	0,48416	0,80746	1,42443	0,69160	0,34776
0,74609	0,70133	0,80746	0,46976	0,53602	0,14394
0,65032	0,27657	0,84022	0,47632	0,62052	0,17881
0,75871	0,62856	0,89159	0,50323	0,70125	0,22067
0,76451	0,54020	0,93919	1,27799	0,76047	0,53208
0,54608	0,25295	0,90195	0,99041	0,66610	0,43101
0,61419	0,40243	0,90195	1,22622	0,76160	0,54676
0,72339	0,59566	0,63275	0,30626	0,59572	0,19777
0,67296	0,32039	0,70932	0,32416	0,67320	0,28355
0,78512	0,81724	0,96601	1,10276	0,69427	0,32109
0,74647	0,61061	0,82801	0,56219	0,79400	0,62538
0,75815	0,98037	0,96601	0,83896	0,79450	0,46611
0,66338	0,49719	0,96601	0,81302	0,75823	0,64743
0,67877	0,37166	0,82801	0,35894	0,74123	0,37850
0,79190	0,69328	0,82801	0,64868	0,64322	0,14191
0,67877	0,46457	0,88692	1,11119	0,67071	0,24625
0,70700	0,45774	0,79162	0,64256	0,69160	0,15876
0,56217	0,10151	0,90471	0,77821	0,70928	0,45705
0,73520	1,06258	0,94563	0,98487	0,60795	0,13010
0,64330	0,43423	0,84056	0,69285	0,65416	0,31987
0,78972	0,79142	0,84056	0,65276	0,73231	0,58058

0,69100	0,53184	0,94563	1,81705	0,64861	0,17018
0,77810	0,97201	0,84056	1,24254	0,73194	0,38940
0,77810	0,98110	0,84056	0,58024	0,73194	0,41762
0,68084	0,55111	0,98405	0,97389	0,78540	0,50202
0,56470	0,36764	0,86105	0,55738	0,75315	0,69337
0,70893	0,90251	0,98405	0,69213	0,68491	0,34695
0,60367	0,46924	0,98405	1,05658	0,66167	0,24024
0,50306	0,20781	0,71714	0,47242	0,74123	0,42814
0,78198	0,93128	0,92204	1,15716	0,64998	0,28450
0,58648	0,34116	0,65504	0,45879	0,70125	0,23380
0,73255	0,73549	0,91706	1,21359	0,75383	0,19906
0,67501	0,48499	0,88082	0,33839	0,66197	0,26518
0,71454	0,20566	0,74904	0,43540	0,79781	0,45848
0,79376	0,69097	0,99872	1,52071	0,73194	0,54178
0,68037	0,48224	0,94484	1,06264	0,64909	0,21600
0,64682	0,24936	0,67728	0,29510	0,68506	0,33310
0,77618	0,73739	0,79888	0,57678	0,73833	0,41086
0,77618	0,62696	0,93616	0,97502	0,79781	0,90665
0,77618	0,26361	0,93616	0,40626	0,75128	0,41994
0,78283	0,18039	0,93616	0,53126	0,75805	0,61858
0,78283	1,03608	0,93616	0,47501	0,74123	0,60498
0,76921	0,74892	0,88433	0,17411	0,77694	0,69296
0,78198	0,28777	0,61180	0,13781	0,66928	0,25652
0,54692	0,15703	0,71377	0,35239	0,72121	0,35061
0,68669	0,59941	0,71775	0,34559	0,71319	0,34820
0,77132	0,44702	0,90973	0,48179	0,79781	0,79432
0,59164	0,44211	0,90331	0,55869	0,76160	0,56583
0,68819	0,37996	0,88336	0,74403	0,77762	0,27521
0,71512	0,87443	0,99216	0,79651	0,75454	0,33798
0,53634	0,17630	0,99216	1,19476	0,51142	0,13476
0,71644	0,35823	0,97338	0,45667	0,73549	0,28630
0,70956	0,49804	0,81115	0,45667	0,74770	0,42034
0,72114	0,55053	0,96601	0,96005	0,83343	0,76201
0,78968	0,65273	0,96601	0,88221	0,61479	0,54847
0,65806	0,22508	0,91927	0,92873	0,73354	0,42764
0,70996	0,39802	0,68945	0,35452	0,67728	0,42923
0,68828	0,39006	0,75203	0,46656	0,68083	0,61056
0,62667	0,57027	0,92718	0,37039	0,65280	0,44504
0,73383	0,87056	0,87938	0,72527	0,79045	0,98992
0,73383	0,68503	0,89102	0,78679	0,79894	0,80805
0,57075	0,26402	1,02698	1,73746	0,73231	0,61844
0,79950	0,89513	1,12703	3,23893	0,69427	0,45755
0,68828	0,39006	0,98615	1,51825	0,64880	0,59614
0,62667	0,57027	1,10159	2,76674	0,70125	0,30998
0,73383	0,87056	0,96389	1,18575	0,74990	0,64375
0,73383	0,68503	0,98689	1,93307	0,75203	1,08119
0,57075	0,26402	0,93939	1,55097	0,70545	0,54559
0,79950	0,89513	0,80519	0,72776	0,70545	0,21930
0,63807	0,24925	1,03278	2,42162	0,65190	0,51495
0,72923	0,57328	1,03278	1,89056	0,88771	0,84028
0,56879	0,11214	1,16188	2,58448	0,71427	0,48858
0,66358	0,36166	1,16188	2,23044	0,75823	0,91309
0,66358	0,53268	1,16188	3,85547	0,66653	0,35191
0,69747	0,40041	1,03278	2,18087	0,87078	1,09096
0,69747	0,69991	1,06495	2,98105	0,62313	0,42025
0,78470	0,56327	1,14205	3,54040	0,85766	0,18997
0,72248	0,61193	1,14205	2,04254	0,73145	0,35546
0,74548	0,44186	1,12286	2,30915	0,60978	0,20296
0,77268	0,54121	0,82619	1,20293	0,83650	0,78257
0,74889	0,66089	1,06736	1,31541	0,73887	0,96191
0,64191	0,24582	0,88947	1,16719	0,74149	0,88045
0,79618	0,56134	0,91420	1,74109	0,68506	0,40168
0,76083	0,48984	1,06857	2,52533	0,74225	0,56698
0,63402	0,21808	1,05095	3,04047	0,61855	0,22430
0,76083	0,48313	0,90082	1,13600	0,78315	0,47421
0,68246	0,15981	1,05095	3,07388	0,62038	0,23573
0,79620	0,84266	0,90082	1,55921	0,80216	0,47542
0,77907	0,41943	1,05095	1,93788	0,74666	0,79200
0,68168	0,19452	0,91636	0,50999	0,63053	0,16757
0,68168	0,25834	1,06909	1,89927	0,74904	0,48663
0,67731	0,31718	1,15288	3,41278	0,74904	0,23371
0,63021	0,40614	0,86466	1,51679	0,80687	0,83665
0,69714	0,50712	1,13301	2,16678	0,96483	1,24679
0,69714	0,59814	0,88123	0,32502	0,65802	0,67250
0,66338	0,19327	1,13301	2,11754	0,88645	0,17995
0,75815	0,58822	1,00712	2,44255	0,69594	0,47761
0,56861	0,17367	1,13301	4,69469	0,69774	0,42440
0,68583	0,38070	1,00712	2,09127	0,69878	0,46788
0,78381	0,55713	0,85619	1,10803	0,69904	0,20297
0,68583	0,50760	1,10081	3,90221	0,64976	0,17136
0,73124	0,60946	1,11860	5,15904	0,81812	0,48862
0,64169	0,27375	1,00674	2,15574	0,76047	0,78621
0,71157	0,38975	1,11860	1,84251	0,65190	0,48118

0,71157	0,18115	1,00674	2,44133	0,85641	1,07184
0,71251	0,38579	1,10086	1,18150	0,76160	0,64848
0,71008	0,40192	1,19260	2,59169	0,63467	0,23220
0,70697	0,59051	1,10086	0,48785	0,70545	0,23268
0,61860	0,35885	1,10086	5,65598	0,93614	0,38946
0,75349	0,64619	1,00913	3,15068	0,71917	0,34570
0,50220	0,12152	1,10086	4,67520	0,89760	0,98545
0,62333	0,09963	1,10086	2,80131	0,74127	0,67416
0,74925	0,81599	0,82565	1,28060	0,73174	0,23281
0,73729	0,61992	0,82782	1,82322	0,89264	1,29238
0,66795	0,24216	1,03478	0,28625	0,79400	0,64826
0,78761	0,95156	0,82782	0,45945	0,79450	0,28654
0,64959	0,42285	0,93130	1,14863	0,84248	1,25157
0,56839	0,24314	0,82782	1,04835	0,86477	1,17893
0,55102	0,16052	0,98065	1,80970	0,96483	1,83268
0,70845	0,52008	1,15351	4,88953	0,93899	0,37335
0,70845	0,31301	0,92281	1,98006	0,92213	0,85429
0,76615	1,02120	0,80746	1,31835	0,64675	0,32150
0,53630	0,24272	1,17631	1,96774	0,91193	0,92436
0,62903	0,19437	1,17631	2,93600	0,64976	0,15673
0,68733	0,32713	1,14633	1,24446	0,81449	0,97463
0,78594	0,65092	1,17399	2,11667	0,81459	0,35412
0,69862	0,35505	1,12743	2,80617	0,81517	1,00139
0,66268	0,26247	0,90195	1,35828	0,81671	0,72208
0,64786	0,15536	0,90195	1,78274	0,98124	1,11743
0,60338	0,26106	0,99432	0,96011	0,81995	0,26182
0,60338	0,31628	0,90393	1,99799	0,82097	0,33722
0,68084	0,44815	0,99305	1,40941	0,70545	0,19256
0,72901	0,46694	0,85119	0,62954	0,91538	1,61552
0,72901	0,70228	1,03229	1,86035	0,76160	0,49806
0,61269	0,25932	1,03229	1,08939	0,83123	1,10711
0,57821	0,21500	1,10401	2,44337	0,77762	0,83466
0,67458	0,32250	1,10401	0,56652	0,71685	0,24414
0,67251	0,29183	1,10401	1,45305	0,94107	1,86236
0,76859	0,62014	1,10401	2,56878	0,94107	1,35632
0,73218	0,41239	1,11800	3,46214	0,89760	1,03194
0,74299	0,44993	1,11800	1,33890	0,67768	0,18730
0,73004	0,18377	1,11800	3,91823	0,94144	0,24302
0,77859	0,50266	1,01637	1,23524	0,71410	0,55005
0,62087	0,26619	1,01637	2,29773	0,70820	0,57045
0,76186	0,51551	0,90471	0,87102	0,60107	0,38214
0,64487	0,15118	0,90471	0,77821	0,85738	0,67219
0,62731	0,20148	1,01779	2,19897	0,68756	0,20800
0,77647	0,39440	0,90471	1,07569	0,68756	0,73294
0,73559	0,69133	1,01779	1,58259	0,78305	0,46772
0,78066	0,47929	1,05070	0,54588	0,98831	1,08896
0,66119	0,39104	0,94563	0,95433	0,86513	0,31699
0,58340	0,11647	0,84056	1,25972	0,75805	0,40124
0,58340	0,11193	0,84056	1,34370	0,72287	0,35304
0,65586	0,25174	1,10706	1,12089	0,74445	0,27659
0,65586	0,32889	0,86105	0,63701	0,76054	0,81885
0,40668	0,17466	0,86105	0,57576	0,93899	1,46161
0,78009	0,76078	1,10706	1,61702	0,81449	0,96426
0,66751	0,26967	0,86105	0,98307	0,69878	0,21314
0,69340	0,32307	0,98405	1,42408	0,80640	0,35154
0,79246	0,54699	1,12694	1,51280	0,80640	0,30760
0,79246	0,78369	1,17908	2,42347	0,69904	0,45799
0,69340	0,38865	1,17908	3,03026	0,72942	0,36272
0,63742	0,63118	1,17908	0,52909	0,75128	0,54915
0,74445	0,44553	1,17908	1,99798	0,73145	0,36061
0,65140	0,26652	1,12356	2,22504	0,94830	0,81822
0,64330	0,33333	0,99872	2,28587	0,72698	0,76492
0,56861	0,18487	0,94484	1,84064	0,72698	0,48660
0,75815	0,34453	1,17224	2,84376	0,97510	0,19142
0,79863	0,57950	1,00477	1,55325	0,84000	1,11308
0,79863	1,01168	1,17224	1,63825	0,88853	0,60575
0,69880	0,55659	1,00477	1,34460	0,77762	0,79405
0,49914	0,10150	1,10319	1,45237	0,94876	0,97987
0,71937	0,26431	1,00290	1,25319	0,80336	0,72559
0,70505	0,17355	1,00290	2,13624	0,89304	0,68335
0,76765	0,50313	1,10319	1,70301	0,67176	0,53345
0,76765	0,49623	1,10319	2,46489	0,95890	1,73418
0,68266	0,25546	1,00290	1,38432	0,83904	0,75658
0,79750	0,56209	1,10319	3,63509	0,77189	0,77779
0,77201	0,48355	1,01934	0,97596	0,94587	0,90497
0,57901	0,08872	1,09219	2,27505	0,90575	1,69466
0,63951	0,14744	1,09219	1,31253	0,97587	0,89166
0,76451	0,19293	1,09219	2,35005	0,72624	0,37934
0,65529	0,18435	0,93616	0,45001	0,91193	0,47588
0,76451	0,52733	1,06120	0,88309	0,81060	0,22082
0,62005	0,11078	1,06120	1,45778	0,85369	0,59695
0,67296	0,40862	0,91770	1,36768	0,68756	0,20305
0,74647	0,65451	0,81573	1,13043	0,78885	1,07700

0,74647	0,23946	0,90973	0,45311	0,92032	0,74044
0,71427	0,38309	0,90973	0,79151	0,70820	0,28055
0,67877	0,55034	1,06135	3,06278	0,92213	1,16929
0,78302	0,42378	0,90973	1,11843	0,98444	0,39247
0,67116	0,32244	1,06135	1,69772	0,86919	0,79142
0,74069	0,43278	0,83318	0,63199	0,86919	1,03412
0,74069	0,47957	0,88579	0,36532	0,86919	0,71544
0,46847	0,10286	1,18105	1,93781	0,69338	0,58663
0,64330	0,38314	1,16140	3,01976	0,65280	0,33060
0,78972	0,49385	0,90331	1,38612	0,98124	0,29002
0,50306	0,33517	0,88336	1,15077	0,79450	0,68006
0,70428	0,44243	1,13574	2,30153	0,85738	0,85464
0,68423	0,22744	1,13389	1,71483	0,81524	0,47308
0,74423	0,43453	1,13389	1,72889	0,83083	0,95845
0,55817	0,11526	0,99216	0,72154	0,86406	0,68803
0,57451	0,10689	0,97338	0,63934	0,87388	1,25499
0,71088	0,24128	1,13561	1,46135	0,86545	0,63209
0,66119	0,27456	0,97338	0,62529	0,93899	0,82613
0,62790	0,12824	0,97338	0,54801	0,87649	0,64606
0,78751	0,38425	1,01206	0,68703	0,93978	2,03912
0,69705	0,27642	1,01206	1,15294	0,82302	1,02699
0,68037	0,19434	1,18073	1,51620	0,94107	1,67236
0,68037	0,18474	1,01206	0,68703	0,94248	0,54209
0,68037	0,36468	1,01206	0,65544	0,66653	0,40154
0,78283	0,67068	1,01206	0,64754	0,88871	1,62645
0,68498	0,31453	0,84338	0,99501	0,94452	1,06511
0,76921	0,22537	1,01206	0,67123	0,82133	1,61188
0,76571	0,55566	1,01206	0,61596	0,94687	0,78195
0,78687	0,28950	1,10401	1,63468	0,90198	0,59409
0,68819	0,22516	1,14908	2,02224	0,78038	0,77518
0,44695	0,08580	1,03417	1,71017	0,95236	0,96606
0,53634	0,07287	1,14908	2,53654	0,95236	0,91609
0,61812	0,26987	1,12804	2,69889	0,95580	0,95973
0,73588	0,41286	0,87736	0,92339	0,72975	0,29975
0,73588	0,18518	1,12804	2,58549	0,71917	0,69707
0,83146	0,90669	1,12804	1,68478	0,95890	1,85319
0,78334	0,12813	1,00270	2,06062	0,92252	1,30158
0,73383	0,97224	0,87736	1,06271	0,64324	0,49050
0,97717	2,21244	1,01482	1,30860	0,86635	0,74605
0,91153	0,42622	1,15979	2,00552	0,75832	0,57110
0,72923	0,15952	0,86985	0,76210	0,81262	0,45916
0,83146	0,90669	1,01482	1,86513	0,75068	0,39537
0,78334	0,12813	0,86985	0,70193	0,69782	0,30865
0,73383	0,97224	1,08171	2,33165	0,86919	0,77875
0,97717	2,21244	1,08171	1,32370	0,75338	0,36025
0,91153	0,42622	0,92718	0,89866	0,76318	0,53739
0,72923	0,15952	1,08171	1,27512	0,80336	0,81337
0,82038	0,89731	1,08171	1,60301	0,89262	1,48512
0,96575	1,76079	1,14478	2,76371	0,80894	0,45204
0,77260	0,64029	0,98124	0,48941	0,61527	0,21770
0,85318	1,62609	1,02471	1,13116	0,92792	0,97576
0,75838	0,92239	1,19550	0,87706	0,92032	1,12187
0,78470	0,78811	1,19550	2,13937	0,83083	0,83312
0,86973	0,97524	1,02000	1,21263	0,98831	2,55642
0,74548	0,67226	0,85000	0,48505	0,93033	1,38447
0,99398	1,64119	0,94413	0,60265	0,84984	0,38342
0,96331	1,94783	0,94413	1,32711	0,92555	0,82160
0,99398	1,62541	1,10149	1,33352	0,79333	0,49448
0,74548	0,49867	1,10149	2,00028	0,66189	0,27821
0,99398	1,06993	0,94413	0,88474	0,62308	0,22928
0,99398	0,71329	1,02595	1,80282	0,99872	1,24218
0,86973	0,64385	1,17251	1,88053	0,66594	0,70195
0,99398	1,87474	1,17251	1,83390	0,66594	0,31948
0,74548	0,51761	1,01989	1,36364	0,71367	0,33495
0,98284	1,60324	1,12703	2,18536	0,92287	0,44309
0,84244	0,29605	1,15137	2,02094	0,88871	1,50238
0,84244	0,69231	0,93939	0,91865	0,70147	0,36098
0,98284	1,16144	1,07359	1,69016	0,93899	0,91748
0,98284	1,44838	1,16188	1,93305	0,86406	1,51366
0,85738	1,10911	1,16188	1,91181	0,86406	0,75683
0,83646	0,70441	1,16188	2,59156	0,93338	0,51415
0,83646	1,11012	1,03278	1,68168	0,93500	0,97140
0,69705	0,27642	0,90368	0,72224	0,88853	0,62594
0,97587	1,85020	0,97850	1,41515	0,83632	0,57808
0,77268	0,28115	1,13333	2,52228	0,94830	0,84277
0,85089	0,28372	1,06495	0,57965	0,90357	1,22100
0,72933	0,22461	0,88746	1,19610	0,93966	0,54356
0,99595	1,13345	1,14205	1,63403	0,81671	0,68058
0,87145	0,64134	0,95171	1,36169	0,95282	0,84658
0,74696	0,26034	1,14205	3,13189	0,72942	0,38826
0,62247	0,23494	0,96245	1,54849	0,87774	0,40698
0,96286	2,19423	0,96389	0,81198	0,95780	0,38781
0,74889	0,61656	0,96389	0,85064	0,98560	1,16150

0,64191	0,29418	1,06736	1,14867	0,84728	0,85788
0,96286	1,24924	0,80143	0,71760	0,91675	1,06970
0,85587	1,75699	1,06857	2,25868	0,97784	0,77875
0,74889	0,82611	0,80143	0,90582	0,87040	1,19736
0,96286	1,18879	1,06857	2,58807	0,84730	1,15333
0,99216	1,26504	1,05095	2,00470	0,73833	0,39247
0,70868	0,31860	0,90082	0,77961	0,87194	0,62831
0,85042	1,04014	0,90082	1,30306	0,81403	0,73752
0,85042	0,83399	0,91636	0,93791	0,83739	0,37127
0,91569	0,46208	1,06909	2,27443	0,90082	0,47333
0,91569	0,46793	0,91636	0,80895	0,99593	1,22188
0,96913	0,52005	0,91636	1,51238	0,88527	1,23749
0,71286	0,33381	0,88123	0,91596	0,86596	0,89721
0,99801	1,45924	1,13301	0,48917	0,96610	1,67997
0,85544	0,65809	1,13301	2,15037	0,81995	0,81720
0,79618	0,31143	1,00712	2,20618	0,89186	1,23116
0,76083	0,80522	1,00712	1,71373	0,92692	0,76411
0,86268	1,11513	1,00712	1,58897	0,99149	0,86971
0,93616	0,48751	0,97850	0,36433	0,89568	1,14311
0,87045	1,10031	0,85619	0,52993	0,96754	1,57384
0,98505	0,88955	1,10081	1,98723	0,71023	0,79694
0,84433	0,38058	0,85619	1,11406	0,85544	0,72485
0,79620	0,76275	1,11860	2,90196	0,71286	0,29089
0,98770	0,87827	1,11860	1,85173	0,66857	0,29110
0,87645	1,45889	0,89488	1,03181	0,80313	0,97082
0,68168	0,72185	1,00674	1,87936	0,93333	1,99069
0,97384	0,51365	1,00913	1,36064	0,88853	0,69997
0,97384	1,06377	1,00913	1,86754	0,72005	0,59957
0,87645	0,88901	1,19260	4,72221	0,84064	0,99177
0,68168	0,57140	1,19260	3,67156	0,97464	0,30720
0,68168	0,48782	1,10086	3,45177	0,97784	2,40591
0,94531	1,95252	1,00913	2,82545	0,91675	0,83942
0,84028	1,05825	0,82782	0,23155	0,81671	0,32369
0,73524	0,78177	1,03478	1,36741	0,87530	0,39848
0,99591	0,26331	1,03478	2,26444	0,93950	0,26018
0,79673	1,13126	0,93130	2,24620	0,87774	0,42243
0,89632	1,29705	0,82782	0,94807	0,92451	0,83043
0,85292	1,27448	0,93130	0,52144	0,99295	2,19212
0,75815	1,11763	0,93130	0,93349	0,93170	0,83438
0,66338	0,59523	0,82782	0,80222	0,99980	1,30838
0,94769	1,80669	0,93130	0,25343	0,95538	0,51815
0,78381	0,69950	0,84056	0,57910	0,94368	2,42696
0,97976	1,94994	0,98065	1,57444	0,99694	1,07951
0,78381	0,78926	0,84056	0,61530	0,87232	0,90755
0,74863	0,70852	1,15351	3,02818	0,92555	1,11828
0,71157	0,62580	0,80746	1,42443	0,79450	0,82524
0,83017	1,09789	0,80746	0,46976	0,87649	0,29396
0,90017	0,76682	1,17631	1,80376	0,83205	1,01695
0,95315	0,85494	1,17631	1,94432	0,75338	0,36588
0,95002	1,86832	0,84022	0,47632	0,75338	0,39965
0,71251	0,54561	1,17631	1,59293	0,79905	0,32647
0,91296	1,11300	1,17631	2,13172	0,99149	0,64527
0,81152	1,07178	1,00827	0,47632	0,99149	0,98193
0,81152	1,37064	1,14633	3,40017	0,83632	0,52196
0,88371	1,46492	1,01896	1,04045	0,97464	1,85782
0,70697	0,85056	0,89159	0,50323	0,90973	0,46458
0,62985	0,42194	0,93919	1,27799	0,97515	0,55805
0,96575	2,06019	1,05659	0,37541	0,99801	0,90606
0,75349	0,26810	1,12743	2,90049	0,71367	0,33974
0,75349	0,88267	1,01469	1,79925	0,97920	1,75472
0,65931	0,61869	0,90195	0,99041	0,89340	1,16312
0,74387	0,94394	1,12743	0,36787	0,81161	0,31359
0,81102	0,13058	0,90195	1,22622	0,96832	1,04172
0,98452	0,26851	1,08471	1,11202	0,86406	1,09102
0,82761	0,15390	1,03229	1,18995	0,94933	0,85371
0,82761	1,24242	1,10401	2,46499	0,94933	1,05893
0,90548	1,39506	0,96601	1,10276	0,86545	0,38518
0,75149	1,19833	0,82801	0,56219	0,81617	0,35620
0,89319	1,73370	0,96601	0,83896	0,77781	0,42743
0,89319	1,43770	0,96601	0,81302	0,93966	0,49932
0,73079	0,82456	0,82801	0,35894	0,97013	1,91868
0,64959	0,48099	0,82801	0,64868	0,79905	0,28760
0,70845	0,74481	1,10401	1,51792	0,96073	1,88094
0,62974	0,48638	1,01637	0,99511	0,90406	0,41654
0,94460	0,34512	1,14032	0,45184	0,97515	1,46224
0,61292	0,43808	1,01362	1,11454	0,81371	0,30372
0,91938	0,44178	0,88692	1,11119	0,81617	0,31064
0,98844	2,08015	1,01779	1,58497	0,98831	1,41161
0,70765	0,83509	1,13088	0,78535	0,90189	1,61615
0,99749	1,54330	1,13088	2,39888	0,83609	0,36064
0,92415	1,81181	1,01779	1,22800	0,83646	0,35221
0,78552	1,01877	0,90471	0,77821	0,97695	0,96621
0,61129	0,43833	1,01779	1,20896	0,93599	1,14475

0,75735	0,82091	1,15577	1,22918	0,91512	0,73644
0,94669	2,17793	0,94563	0,98487	0,99801	1,20173
0,86382	0,87832	0,84056	0,69285	0,99914	1,83745
0,64786	0,44745	0,84056	0,65276	0,95780	0,87678
0,74119	0,72666	0,94563	1,81705	0,97996	0,57353
0,96532	2,13803	0,84056	1,24254	0,94107	2,40037
0,85807	1,11673	0,84056	0,58024	0,93338	0,47079
0,99536	1,47054	1,15577	2,92026	0,93338	1,10264
0,99536	1,33110	1,10706	1,21276	0,84728	0,96877
0,87094	0,80816	1,10706	0,39507	0,81193	0,67019
0,77347	0,49352	1,10706	0,80238	0,77079	0,27210
0,90239	1,35366	0,98405	0,97389	0,72782	0,67325
0,77347	0,43007	0,86105	0,55738	0,75259	0,50962
0,87025	1,15088	1,10706	0,86364	0,98073	1,61684
0,86712	0,63513	0,98405	0,69213	0,93802	0,57217
0,97173	0,86966	0,98405	1,05658	0,94484	0,78835
0,90507	1,58140	1,10706	2,22953	0,89123	1,09961
0,80451	0,87856	1,12694	1,41548	0,89734	0,65631
0,90507	0,26273	1,12694	2,47179	0,94074	0,98635
0,87537	1,28239	0,92204	1,15716	0,83175	0,66017
0,87537	1,67604	1,12694	1,21732	0,63402	0,23843
0,77810	0,90842	1,17908	1,89438	0,63854	0,23731
0,72901	1,09576	1,04807	1,20989	0,76047	0,70184
0,63789	0,51675	0,91706	1,21359	0,70282	0,20628
0,91904	1,61899	1,04807	0,86579	0,65280	0,13351
0,81693	0,85505	1,04807	1,29868	0,75203	0,47020
0,71481	0,65881	1,04807	1,86848	0,73686	0,40290
0,61269	0,39949	1,02762	1,45247	0,80336	0,68814
0,66594	0,34648	0,88082	0,33839	0,83083	0,73727
0,66594	0,45897	1,12356	2,84293	0,76593	0,68765
0,86731	1,63019	0,99872	1,52071	0,64077	0,17417
0,77094	0,65384	0,94484	1,06264	0,69427	0,32430
0,67458	0,51247	1,18105	0,85662	0,74149	0,47167
0,96368	0,25182	1,17224	1,40643	0,81449	0,17108
0,86466	0,91927	1,10319	1,00919	0,70125	0,21279
0,86682	0,78738	1,00290	1,56856	0,65616	0,32527
0,61916	0,19684	1,08685	1,56483	0,65802	1,03335
0,83045	0,94994	0,93616	0,97502	0,70545	0,41721
0,99654	0,61821	1,09219	2,17505	0,70545	0,22198
0,83632	0,73243	0,93616	0,40626	0,76054	0,64158
0,71685	0,35359	1,09219	1,22503	0,71427	0,18599
0,71685	0,58931	0,93616	0,53126	0,67398	0,36406
0,70321	0,55631	0,93616	0,47501	0,83632	0,34236
0,88943	0,58733	1,13517	1,62697	0,77762	0,34740
0,76237	0,70885	1,13517	0,92492	0,83083	1,00638
0,68844	0,32314	1,13517	1,53782	0,60036	0,20762
0,80318	0,70096	1,07167	0,32201	0,73145	0,31425
0,97338	1,93844	1,17883	3,45099	0,85369	0,48950
0,85171	1,45235	0,88433	0,17411	0,62738	0,13356
0,97338	0,99590	1,06120	1,01851	0,92034	1,10830
0,85171	0,58687	1,06135	1,03240	0,73887	0,38373
0,77859	1,08683	0,90973	0,48179	0,74149	0,43237
0,82782	0,94807	1,16140	1,76801	0,79924	0,48495
0,93130	1,14863	0,90331	0,55869	0,74225	0,54206
0,93130	1,09393	1,13574	2,93644	0,86596	0,59814
0,72435	0,56155	0,88336	0,74403	0,70483	0,44892
0,88903	1,15169	0,99216	0,79651	0,86853	0,27345
0,76186	0,58552	1,13389	2,43637	0,68756	0,35162
0,87070	1,09254	0,99216	1,19476	0,74666	0,71440
0,65302	0,34791	1,13561	1,55971	0,86697	0,27230
0,97954	1,73745	1,13561	1,83372	0,74904	0,22731
0,85983	0,66804	0,97338	0,45667	0,74904	0,42900
0,87824	1,26738	1,13561	1,87587	0,69160	0,34776
0,87824	1,26088	0,81115	0,45667	0,84603	0,82832
0,87824	1,04315	1,18073	1,94263	0,62052	0,17881
0,87824	0,64344	1,18073	1,56358	0,81193	0,35435
0,87824	0,63044	1,18073	1,48461	0,93033	0,94196
0,96888	0,96460	0,96601	0,96005	0,81403	0,81774
0,93176	1,47900	1,10401	2,07578	0,81524	0,58485
0,77647	0,42521	0,96601	0,88221	0,81554	0,83271
0,98079	1,50092	1,14908	2,27690	0,97464	1,27895
0,78163	0,88886	0,91927	0,92873	0,86635	0,75232
0,94095	0,98798	1,00270	1,20527	0,70125	0,22067
0,94095	0,97995	1,12804	1,79818	0,76047	0,53208
0,94456	0,22742	0,92718	0,37039	0,86919	0,61625
0,85010	1,27159	1,14478	1,02200	0,66610	0,43101
0,77786	0,83195	1,02471	0,50001	0,76160	0,54676
0,84325	1,25465	1,19000	1,14796	0,88853	0,43748
0,65586	0,52785	1,02000	0,63057	0,82302	0,24070
0,60674	0,24109	1,10149	1,57714	0,83904	0,75658
0,95359	1,44967	1,02595	0,75636	0,67320	0,28355
0,85823	0,95028	1,17251	1,90643	0,83393	0,67023
0,89151	1,87127	0,87938	0,72527	0,85369	0,57904

0,79246	0,84767	1,17251	2,69387	0,69427	0,32109
0,69340	0,52459	1,02595	1,15008	0,79400	0,62538
0,91061	0,22240	1,08455	0,61226	0,79450	0,46611
0,72849	0,58396	0,89102	0,78679	0,75823	0,64743
0,83751	1,10454	1,05334	1,57755	0,74123	0,37850
0,65140	0,39249	1,20673	2,69021	0,64322	0,14191
0,82710	1,12643	1,26791	6,07300	0,67071	0,24625
0,85292	1,42434	1,12703	3,23893	0,69160	0,15876
0,94769	1,79268	1,37699	6,42279	0,97013	0,77901
0,75815	0,72127	1,10159	2,76674	0,70928	0,45705
0,99828	1,39474	1,34199	7,40490	0,60795	0,13010
0,89845	1,34072	1,34199	1,31236	0,97464	1,33746
0,69880	0,48128	1,34199	2,92299	0,81449	0,62211
0,92490	1,41443	1,20779	2,82357	0,81459	0,32118
0,61660	0,26789	1,34199	5,46817	0,81517	0,80453
0,97019	1,45277	1,20779	3,40419	0,81671	0,26144
0,72764	0,41089	1,29098	5,43802	0,65416	0,31987
0,91083	0,47778	1,03278	2,42162	0,81995	0,23537
0,75902	0,39719	1,03278	1,89056	0,82097	0,53956
0,76812	0,78748	1,29098	1,26746	0,94060	1,04838
0,84112	0,36267	1,16188	2,58448	0,73231	0,58058
0,68266	0,28478	1,29098	3,79175	0,88853	0,84804
0,68357	0,68133	1,16188	2,23044	0,83123	0,80116
0,96501	0,24399	1,16188	3,85547	0,88871	0,79405
0,97163	2,16621	1,03278	2,18087	0,64861	0,17018
0,80669	1,33893	1,06495	2,98105	0,95580	1,10005
0,60766	0,66663	1,24244	4,18635	0,73194	0,38940
0,97548	2,07843	1,14205	3,54040	0,73194	0,41762
0,86709	0,85484	1,33239	3,67657	0,78540	0,50202
0,65032	0,57827	1,14205	2,04254	0,75315	0,69337
0,92359	1,49343	1,28326	6,85953	0,98189	1,41608
0,80588	1,33965	1,12286	2,30915	0,99149	0,83230
0,99604	1,78359	1,23929	4,59691	0,68491	0,34695
0,68725	0,50074	1,23929	6,97700	0,85738	0,34090
0,95113	0,47856	1,37699	5,06520	0,66167	0,24024
0,85602	1,31391	1,06736	1,31541	0,93966	0,80902
0,74609	0,52600	1,30600	6,92771	0,74123	0,42814
0,74609	0,59773	1,20214	3,45860	0,86513	0,15289
0,63951	0,48416	1,20214	3,76446	0,97464	0,78367
0,74609	0,70133	1,06857	2,52533	0,64998	0,28450
0,65032	0,27657	1,33571	1,31756	0,99260	0,71033
0,75871	0,62856	1,20214	2,54886	0,97784	0,82730
0,76451	0,54020	1,20214	2,84688	0,80485	0,50839
0,94385	0,23521	1,05095	3,04047	0,93084	0,93316
0,84946	0,81630	1,35122	6,51528	0,94080	0,39947
0,84946	1,06534	1,05095	3,07388	0,94080	0,81493
0,92129	1,36614	1,35122	6,51528	0,70125	0,23380
0,81892	1,03784	1,35122	5,03403	0,75383	0,19906
0,61419	0,40243	1,05095	1,93788	0,81283	0,53184
0,82673	1,29665	1,35122	2,22188	0,66197	0,26518
0,72339	0,59566	1,37454	3,37647	0,79781	0,45848
0,67296	0,32039	1,37454	7,26880	0,93333	1,44486
0,78512	0,81724	1,22182	3,13614	0,88853	1,17111
0,94787	1,72429	1,06909	1,89927	0,99980	1,51592
0,94787	1,78997	1,22182	1,61789	0,73194	0,54178
0,82939	0,72256	1,37454	2,86062	0,83017	0,65873
0,74647	0,61061	1,29699	6,60887	0,98189	1,79057
0,85311	1,42477	1,15288	3,41278	0,89304	0,79952
0,75815	0,98037	1,29699	5,18565	0,83904	0,61206
0,66338	0,49719	1,38479	6,38216	0,95890	0,44205
0,84177	1,17889	1,13301	2,16678	0,85989	1,24289
0,99355	0,89084	1,25890	1,08339	0,90575	1,07842
0,83331	0,98827	1,25890	1,91727	0,83646	0,63308
0,95236	1,38802	1,13301	2,11754	0,64909	0,21600
0,67877	0,37166	1,00712	2,44255	0,91193	1,16059
0,90503	1,38180	1,13301	4,69469	0,68506	0,33310
0,79190	0,69328	1,00712	2,09127	0,97565	1,02078
0,67877	0,46457	1,25890	0,51215	0,92032	0,80775
0,84651	1,51473	1,25890	2,28497	0,92213	0,69553
0,95232	1,63754	1,34544	2,69481	0,73833	0,41086
0,70700	0,45774	1,10081	3,90221	0,86138	0,71748
0,80800	0,70526	1,11860	5,15904	0,97784	1,13964
0,84325	1,12607	1,00674	2,15574	0,97784	1,24094
0,73520	1,06258	1,11860	1,84251	0,97784	0,77031
0,64330	0,43423	1,34232	5,94211	0,87221	0,83594
0,98715	2,15900	1,34232	6,30140	0,79781	0,90665
0,78972	0,79142	1,23046	4,33221	0,99872	1,20376
0,69100	0,53184	1,23046	2,15574	0,93899	1,01280
0,77810	0,97201	1,23046	5,99508	0,75128	0,41994
0,97263	2,38007	1,00674	2,44133	0,93978	2,10551
0,77810	0,98110	1,34232	3,39022	0,94107	0,65465
0,68084	0,55111	1,10086	1,18150	0,94248	0,51658
0,94116	2,53505	1,19260	2,59169	0,88070	0,77667

0,70893	0,90251	1,10086	0,48785	0,99980	1,87685
0,80489	0,67034	1,28434	6,74220	0,94452	0,50212
0,60367	0,46924	1,10086	5,65598	0,94687	0,60275
0,97747	2,01316	1,00913	3,15068	0,82860	0,22380
0,78198	0,93128	1,10086	4,67520	0,99218	1,62045
0,97747	0,25818	1,10086	2,80131	0,83017	0,35681
0,93029	1,71694	1,34521	1,45128	0,83017	0,45013
0,83726	1,15523	1,03478	0,28625	0,83205	1,06117
0,91399	1,56832	1,26084	4,72332	0,85641	1,12288
0,98083	2,45940	1,26084	2,51548	0,90161	1,72048
0,83720	0,76944	1,38422	7,29894	0,95236	0,64127
0,73255	0,73549	1,26886	5,37444	0,95236	0,94385
0,94185	1,43892	1,15351	4,88953	0,81671	0,28219
0,90001	0,99341	1,34436	4,56797	0,89760	0,80881
0,67501	0,48499	1,34436	4,29467	0,95580	0,89800
0,71454	0,20566	1,17631	1,96774	0,95890	1,66617
0,90297	0,80766	1,34436	2,81106	0,75805	0,61858
0,96049	1,05303	1,34436	2,64708	0,86665	0,72800
0,96049	0,51301	1,17631	2,93600	0,92213	0,87697
0,92318	0,71466	1,27370	2,01290	0,74123	0,60498
0,97439	0,55676	1,14633	1,24446	0,98831	1,28752
0,79376	0,69097	1,29139	2,01283	0,92692	1,14616
0,68037	0,48224	1,17399	2,11667	0,94107	1,09484
0,90554	1,01525	1,24018	5,35766	0,88527	0,30324
0,64682	0,24936	1,12743	2,80617	0,99872	1,20376
0,77618	0,73739	1,24018	1,26631	0,77694	0,69296
0,90554	0,74096	1,27678	2,29264	0,66928	0,25652
0,77618	0,62696	1,36690	1,69266	0,91325	0,64171
0,77618	0,26361	1,36690	1,51756	0,87947	0,77341
0,78283	0,18039	1,37638	2,09499	0,82860	0,16648
0,88068	0,78940	1,37638	2,86594	0,94080	0,36352
0,78283	1,03608	1,20433	1,55867	0,94876	1,11985
0,76921	0,74892	1,03229	1,86035	0,72121	0,35061
0,89741	0,70038	1,37638	3,68718	0,71319	0,34820
0,89741	0,62410	1,20433	2,74862	0,79781	0,79432
0,91231	0,69940	1,03229	1,08939	0,97784	0,27014
0,78198	0,28777	1,38001	2,52554	0,76160	0,56583
0,86095	0,58804	1,24201	4,17752	0,90873	0,96119
0,82038	1,30110	1,10401	2,44337	0,94484	0,76614
0,98448	1,91466	1,10401	0,56652	0,98967	1,00936
0,91558	1,49482	1,38001	3,11368	0,90406	1,24962
0,68669	0,59941	1,24201	2,24877	0,77762	0,27521
0,92559	0,50138	1,24201	3,84020	0,82860	0,90611
0,92559	0,47118	1,38001	2,54284	0,87947	1,10954
0,77132	0,44702	1,24201	2,33526	0,93899	0,65137
0,99801	0,90606	1,10401	1,45305	0,90873	1,18079
0,85544	0,37673	1,24201	3,63262	0,98831	1,34957
0,99801	1,54508	1,10401	2,56878	0,96483	1,82457
0,98313	0,74115	1,11800	3,46214	0,75454	0,33798
0,68819	0,37996	1,11800	1,33890	0,93599	0,59008
0,71512	0,87443	1,11800	3,91823	0,80313	0,63932
0,83832	0,15996	1,01637	1,23524	0,93699	0,56039
0,86260	1,19978	1,01637	2,29773	0,93899	0,62754
0,85973	0,86168	1,24397	1,66589	0,85544	0,32904
0,71644	0,35823	1,35706	0,48311	0,81161	0,27694
0,84946	0,39691	1,35706	2,51311	0,73549	0,28630
0,94608	0,95526	1,24397	2,39888	0,99078	0,48160
0,94608	1,23830	1,24397	4,34082	0,98831	1,12929
0,70956	0,49804	1,01779	2,19897	0,89340	1,29995
0,82416	1,12265	1,01779	1,58259	0,99914	1,22018
0,72114	0,55053	1,26084	2,17588	0,97996	0,46599
0,78968	0,65273	1,05070	0,54588	0,86233	1,26126
0,65806	0,22508	1,36591	4,32504	0,74770	0,42034
0,70996	0,39802	1,35307	2,11928	0,97565	0,45987
0,85853	0,83786	1,23007	2,32753	0,93084	0,69209
0,85853	1,44196	1,10706	1,12089	0,98073	1,00603
0,96000	0,57289	1,10706	1,61702	0,87889	0,93056
0,82379	0,70565	1,33183	1,08285	0,99260	1,07493
0,62667	0,57027	1,33183	3,56171	1,01287	1,35513
0,73383	0,87056	1,12694	1,51280	0,88771	0,84028
0,73383	0,68503	1,31009	0,60679	0,87078	1,09096
0,79950	0,89513	1,31009	2,05717	0,85766	0,18997
0,63807	0,24925	1,17908	2,42347	0,83650	0,78257
0,82379	0,70565	1,17908	3,03026	0,80216	0,47542
0,62667	0,57027	1,17908	0,52909	0,80687	0,83665
0,73383	0,87056	1,17908	1,99798	0,96483	1,24679
0,73383	0,68503	1,31009	4,62864	0,88645	0,17995
0,79950	0,89513	1,12356	2,22504	0,81812	0,48862
0,63807	0,24925	1,17224	2,84376	0,85641	1,07184
0,91153	1,31231	1,00477	1,55325	0,93614	0,38946
0,72923	0,57328	1,17224	1,63825	0,89760	0,98545
0,91127	1,09576	1,00477	1,34460	0,89264	1,29238
0,91503	1,46471	1,35455	7,43998	0,84248	1,25157

0,66358	0,36166	1,35455	5,29532	0,86477	1,17893
0,85318	1,31209	1,20348	2,03332	0,96483	1,83268
0,66358	0,53268	1,10319	1,45237	0,93899	0,37335
0,69747	0,40041	1,00290	1,25319	0,92213	0,85429
0,89674	1,13938	1,00290	2,13624	0,91193	0,92436
0,69747	0,69991	1,10319	1,70301	1,01325	1,06815
0,78470	0,56327	1,10319	2,46489	0,81449	0,97463
0,96331	1,29281	1,00290	1,38432	0,81459	0,35412
0,72248	0,61193	1,10319	3,63509	0,81517	1,00139
0,99398	1,08571	1,36861	5,78076	0,81671	0,72208
0,86973	0,70066	1,36861	4,18344	0,98124	1,11743
0,99398	1,21195	1,01934	0,97596	0,81995	0,26182
0,74548	0,44186	1,29284	1,38277	0,82097	0,33722
0,98284	1,12044	1,09219	2,27505	0,91538	1,61552
0,84244	1,06579	1,24821	3,78758	0,83123	1,10711
0,98284	1,01113	1,24821	2,25005	1,01925	0,24348
0,85738	0,59537	1,09219	1,31253	0,94107	1,86236
0,77268	0,54121	1,09219	2,35005	0,94107	1,35632
0,85089	0,53197	1,24821	2,15629	0,89760	1,03194
0,85089	0,28372	1,32437	2,22873	0,94144	0,24302
0,87145	0,58101	1,32437	2,31788	1,02736	0,20135
0,99595	1,04773	1,32437	2,45160	0,85738	0,67219
0,87145	0,60324	1,32437	3,07565	1,05867	1,29271
0,87145	0,58419	1,32437	2,25102	0,98831	1,08896
0,96286	1,32984	1,28600	2,04548	0,86513	0,31699
0,74889	0,66089	1,06120	0,88309	1,08331	1,97689
0,64191	0,24582	1,06120	1,45778	0,93899	1,46161
0,85587	0,86641	1,22349	1,55779	0,81449	0,96426
0,91569	1,02945	1,21297	2,01318	0,80640	0,35154
0,91569	0,47378	1,21297	4,12959	0,80640	0,30760
0,80761	0,51312	1,06135	3,06278	1,05187	2,07794
0,96873	0,80180	1,06135	1,69772	1,00511	0,79626
0,94201	0,75927	1,35661	3,90818	0,94830	0,81822
0,92888	0,65362	1,32868	2,77434	1,10328	0,35357
0,79618	0,56134	1,18105	1,93781	0,97510	0,19142
0,76083	0,48984	1,32868	3,44146	0,84000	1,11308
0,63402	0,21808	1,29045	2,03675	0,88853	0,60575
0,76083	0,48313	1,16140	3,01976	1,04563	1,43345
0,98505	1,07296	1,38813	1,61702	0,94876	0,97987
0,68246	0,15981	1,38813	3,33325	0,80336	0,72559
0,79620	0,84266	1,26194	1,94440	0,89304	0,68335
0,84660	1,06779	1,26194	3,46552	0,95890	1,73418
0,98770	1,42835	1,13574	2,30153	0,83904	0,75658
0,98770	1,30354	1,27563	1,96784	0,94587	0,90497
0,84660	0,59168	1,27563	2,60505	0,90575	1,69466
0,87938	0,34191	1,27563	1,71483	0,97587	0,89166
0,77907	0,41943	1,13389	1,71483	1,16836	2,41917
0,68168	0,19452	1,13389	1,72889	0,91193	0,47588
0,97384	1,55615	1,29784	0,91334	0,81060	0,22082
0,87645	0,91181	1,29784	0,88524	1,14177	0,38453
0,68168	0,25834	1,29784	1,50351	0,85369	0,59695
0,67731	0,31718	1,13561	1,46135	0,92032	0,74044
0,84028	0,84851	1,01206	0,68703	0,92213	1,16929
0,63021	0,40614	1,01206	1,15294	1,10749	2,74726
0,89632	1,02398	1,18073	1,51620	0,98444	0,39247
0,69714	0,50712	1,01206	0,68703	0,86919	0,79142
0,69714	0,59814	1,01206	0,65544	0,86919	1,03412
0,66338	0,19327	1,01206	0,64754	0,86919	0,71544
0,94769	2,11761	1,34941	1,70572	0,98124	0,29002
0,85292	1,02939	1,01206	0,67123	0,85738	0,85464
0,75815	0,58822	1,01206	0,61596	1,06374	0,20976
0,85292	1,19886	1,38001	2,61203	0,81524	0,47308
0,68583	0,38070	1,10401	1,63468	0,83083	0,95845
0,88178	1,41138	1,38001	2,75041	0,86406	0,68803
0,78381	0,55713	1,24201	2,24877	0,87388	1,25499
0,88178	1,11580	1,14908	2,02224	0,86545	0,63209
0,68583	0,50760	1,03417	1,71017	0,93899	0,82613
0,91405	0,21614	1,14908	2,53654	0,87649	0,64606
0,73124	0,60946	1,12804	2,69889	1,12692	2,26121
0,64169	0,27375	1,12804	2,58549	0,93978	2,03912
0,96253	1,40899	1,12804	1,68478	0,82302	1,02699
0,94876	1,27629	1,00270	2,06062	0,94107	1,67236
0,71157	0,38975	1,30477	2,36651	0,94248	0,54209
0,94876	1,26257	1,01482	1,30860	1,00652	1,70409
0,71157	0,18115	1,30477	4,10630	0,88871	1,62645
0,90017	0,38341	1,15979	2,00552	0,94452	1,06511
0,90017	1,35027	1,30477	4,31688	0,82133	1,61188
0,90017	0,77793	1,01482	1,86513	0,94687	0,78195
0,90232	0,69399	1,23624	2,09484	1,06535	2,27345
0,90232	0,70518	1,08171	2,33165	0,90198	0,59409
0,83127	0,71922	1,08171	1,32370	1,06736	1,03750
0,95002	1,25381	1,23624	3,24852	1,06736	1,97620
0,71251	0,38579	1,23624	2,09484	1,06978	0,41728

0,71008	0,40192	1,08171	1,27512	1,04672	2,29256
0,91296	1,62313	1,08171	1,60301	1,00178	1,28209
0,70697	0,59051	1,30832	2,39666	0,95236	0,96606
0,61860	0,35885	1,14478	2,76371	0,95236	0,91609
0,89978	1,56909	1,30832	2,50462	1,08894	1,80935
0,80980	0,44591	1,02471	1,13116	1,00980	1,79892
0,84768	0,91429	1,19550	0,87706	0,95580	0,95973
0,94187	1,75433	1,19550	2,13937	0,95890	1,85319
0,75349	0,64619	1,02000	1,21263	0,92252	1,30158
0,82652	0,14958	1,36000	0,94585	0,86635	0,74605
0,62333	0,09963	1,36000	2,69204	1,19123	1,14729
0,74925	0,81599	1,25884	2,34648	1,08331	1,58988
0,73729	0,61992	1,25884	1,53868	0,81262	0,45916
0,66795	0,24216	1,10149	1,33352	0,86919	0,77875
0,78761	0,95156	1,10149	2,00028	1,03740	0,92989
0,82761	1,06334	1,31907	3,03060	0,80336	0,81337
0,99313	0,53167	1,02595	1,80282	0,89262	1,48512
0,99313	1,13609	1,31907	2,73532	0,80894	0,45204
0,97693	1,72627	1,17251	1,88053	0,92792	0,97576
0,89319	1,39541	1,31907	2,05149	0,92032	1,12187
0,81199	1,09501	1,31907	1,97378	0,83083	0,83312
0,64959	0,42285	1,31907	2,88037	0,98831	2,55642
0,70845	0,52008	1,31907	1,95824	0,93033	1,38447
0,70845	0,31301	1,17251	1,83390	0,84984	0,38342
0,94460	0,32425	1,26531	0,90381	0,92555	0,82160
0,76615	1,02120	1,30266	1,39771	1,05934	1,54350
0,98844	1,46493	1,24666	3,45773	1,04563	2,84432
0,62903	0,19437	1,31668	0,60848	1,10658	0,35898
0,88371	1,09042	1,32697	5,12128	0,99872	1,24218
0,68733	0,32713	1,24873	1,30535	0,92287	0,44309
0,78594	0,65092	1,38600	3,19717	0,88871	1,50238
0,69862	0,35505	1,21277	2,40337	1,00028	0,92186
0,66268	0,26247	1,12703	2,18536	1,09590	0,74198
0,95258	1,13500	1,23929	3,00733	1,13075	0,46013
0,85823	1,39973	1,15137	2,02094	0,93899	0,91748
0,64786	0,15536	1,34199	1,24873	1,18372	2,56002
0,96532	1,54921	1,34199	3,10195	1,07520	0,85488
0,99457	1,47022	1,34199	5,82211	1,06736	1,02927
0,90507	1,05427	1,20779	2,69631	0,86406	1,51366
0,80451	0,81999	1,07359	1,69016	1,00807	0,43247
0,60338	0,26106	1,29098	3,51206	0,86406	0,75683
0,60338	0,31628	1,16188	1,93305	0,93338	0,51415
0,97263	1,47770	1,29098	1,18957	0,93500	0,97140
0,68084	0,44815	1,16188	1,91181	0,88853	0,62594
0,97263	1,47316	1,29098	3,44479	0,83632	0,57808
0,97263	1,29602	1,16188	2,59156	0,94830	0,84277
0,97263	0,47238	1,03278	1,68168	0,90357	1,22100
0,72901	0,46694	1,22312	3,90823	0,93966	0,54356
0,91127	1,51912	1,25595	1,30056	0,81671	0,68058
0,72901	0,70228	1,37013	3,03464	0,95282	0,84658
0,81693	0,84104	1,25595	4,86913	1,02304	2,19011
0,61269	0,25932	1,37013	4,87158	1,02403	0,91699
0,99892	1,66939	1,24666	2,85523	0,87774	0,40698
0,88793	1,29592	1,13333	2,52228	0,95780	0,38781
0,86731	0,99402	1,24244	2,56701	0,98560	1,16150
0,86731	1,29591	1,24244	2,29099	0,84728	0,85788
0,67458	0,32250	1,06495	0,57965	0,91675	1,06970
0,67251	0,29183	1,33239	5,27655	1,08649	0,30601
0,76859	0,62014	1,14205	1,63403	0,97784	0,77875
0,83678	0,78335	1,33239	2,79147	0,87040	1,19736
0,73218	0,41239	1,14205	3,13189	0,84730	1,15333
0,74299	0,44993	1,28326	3,25998	1,16836	3,95276
0,99065	1,18732	1,23929	0,65302	1,13381	1,97642
0,93761	1,24507	1,37699	4,56254	1,04563	1,40147
0,82041	0,34438	1,24525	4,02959	1,04633	0,68067
0,83395	0,85697	1,24525	2,89019	0,87194	0,62831
0,95308	0,94600	1,06736	1,14867	0,81403	0,73752
0,85171	0,38532	1,30600	1,18761	0,83739	0,37127
0,97338	0,99590	1,20214	2,96452	1,04720	3,03276
0,73004	0,18377	1,06857	2,25868	1,04924	0,75676
0,97338	1,07889	1,33571	2,52533	1,04924	0,65117
0,85171	0,20451	1,33571	3,55271	0,90082	0,47333
0,97338	0,49202	1,20214	1,99203	0,99593	1,22188
0,77859	0,50266	1,06857	2,58807	0,88527	1,23749
0,93130	0,81133	1,20109	1,78196	0,86596	0,89721
0,62087	0,26619	1,35122	0,79074	1,11338	2,29909
0,93130	1,15957	1,35122	4,63309	1,01097	1,73173
0,88903	0,74070	1,05095	2,00470	0,96610	1,67997
0,76186	0,51551	1,20109	3,03490	0,81995	0,81720
0,64487	0,15118	1,20109	3,30776	0,89186	1,23116
0,87479	0,67126	1,35122	4,27670	0,92692	0,76411
0,87824	0,75068	1,37454	0,82653	0,99149	0,86971
0,62731	0,20148	1,37454	6,14331	0,89568	1,14311

0,96888	1,02599	1,37454	4,43162	0,96754	1,57384
0,96888	1,40306	1,06909	2,27443	1,12200	2,69837
0,84777	0,38584	1,22182	0,67412	1,02030	1,99591
0,77647	0,39440	1,37454	3,00131	1,06736	1,50411
0,93176	0,80112	1,37454	5,04713	0,85544	0,72485
0,73559	0,69133	1,22182	3,48199	1,06948	0,72686
0,89329	1,13399	1,22182	0,79136	0,80313	0,97082
0,82333	0,69882	1,29699	3,99881	1,07140	1,49906
0,82333	0,62652	1,38479	5,17073	1,07161	0,71246
0,78066	0,47929	1,38479	4,17598	0,93333	1,99069
0,66119	0,39104	1,25890	3,14840	1,01546	1,95185
0,94456	1,30903	1,13301	0,48917	0,88853	0,69997
0,87510	0,87128	1,25890	1,87788	0,84064	0,99177
0,65586	0,25174	1,13301	2,15037	1,00969	1,37776
0,65586	0,32889	1,00712	2,20618	1,08214	1,44172
0,78009	0,76078	1,00712	1,71373	0,97464	0,30720
0,85823	0,59927	1,25890	1,74656	1,08293	0,33645
0,66751	0,26967	1,00712	1,58897	0,97784	2,40591
0,69340	0,32307	1,22312	3,79381	1,14594	1,78284
0,79246	0,54699	1,10081	1,98723	0,91675	0,83942
0,79246	0,78369	1,34544	3,45658	0,81671	0,32369
0,69340	0,38865	1,22312	2,60147	1,08894	1,41926
0,63742	0,63118	1,34232	4,28384	1,17757	2,04457
0,74445	0,44553	1,11860	2,90196	0,87530	0,39848
0,65140	0,26652	1,11860	1,85173	1,13794	3,01291
0,91900	1,03448	1,23046	1,48322	1,03740	1,36082
0,64330	0,33333	1,34232	4,44506	0,93950	0,26018
0,85292	1,04900	1,23046	1,41874	0,87774	0,42243
0,75815	0,34453	1,23046	4,24930	1,02403	1,06124
0,79863	0,57950	1,00674	1,87936	1,01287	0,64911
0,79863	1,01168	1,23046	2,66013	0,92451	0,83043
0,69880	0,55659	1,00913	1,36064	1,09846	2,23396
0,94941	1,09414	1,00913	1,86754	1,09846	3,03920
0,71937	0,26431	1,28434	5,73220	1,10196	1,59806
0,92174	0,47129	1,19260	4,72221	0,99295	2,19212
0,70505	0,17355	1,19260	3,67156	1,01238	2,99652
0,76765	0,50313	1,10086	3,45177	1,04662	1,69500
0,76765	0,49623	1,00913	2,82545	0,93170	0,83438
0,98131	1,11520	1,03478	1,36741	1,10831	2,90389
0,84112	0,27653	1,03478	2,26444	1,11010	1,47986
0,98131	0,69813	1,26084	4,14874	0,99980	1,30838
0,68266	0,25546	1,26084	2,66931	1,11240	0,76549
0,79750	0,56209	1,38422	4,04599	0,95538	0,51815
0,77201	0,48355	1,38422	6,30386	0,94368	2,42696
0,96501	1,64140	1,26886	3,51056	1,07115	2,78534
0,81021	0,55894	1,15351	3,02818	1,05817	1,57793
0,81021	0,36579	1,38422	4,29349	1,07405	1,23883
0,86709	0,57827	1,34436	3,31080	1,05378	0,76720
0,86709	0,43161	1,17631	1,80376	0,99694	1,07951
0,86709	0,82970	1,17631	1,94432	0,87232	0,90755
0,92359	0,99821	1,17631	1,59293	1,12200	1,75476
0,89542	0,67573	1,17631	2,13172	1,12200	1,66179
0,94497	1,17569	1,00827	0,47632	1,12356	2,32429
0,85602	1,17799	1,14633	3,40017	1,12356	1,17175
0,95113	0,23928	1,01896	1,04045	0,92555	1,11828
0,85268	0,54991	1,05659	0,37541	1,05867	2,05919
0,63951	0,14744	1,35292	5,28220	1,19100	1,44143
0,97548	1,46664	1,12743	2,90049	1,00170	1,09507
0,97548	1,61330	1,01469	1,79925	0,87649	0,29396
0,76451	0,19293	1,12743	0,36787	0,83205	1,01695
0,65529	0,18435	1,35292	3,03726	1,06978	0,98655
0,76451	0,52733	1,08471	1,11202	1,19045	1,91547
0,98294	1,24760	1,27678	2,34902	1,13233	1,69098
0,87373	0,54020	1,37638	2,07823	1,13279	0,89695
0,84946	0,96849	1,37638	2,84080	1,13279	0,86373
0,92129	0,90370	1,37638	3,21790	0,99149	0,64527
0,81892	0,75896	1,03229	1,18995	0,99149	0,98193
0,82673	0,60292	1,37638	3,60338	1,04633	0,69812
0,62005	0,11078	1,38001	2,33526	0,83632	0,52196
0,67296	0,40862	1,10401	2,46499	1,19475	2,02049
0,89728	0,82652	1,38001	2,81096	0,97464	1,85782
0,82939	0,40507	1,38001	2,56013	1,19123	1,43777
0,82939	0,60761	1,38001	3,15692	1,08293	1,32910
0,74647	0,65451	1,10401	1,51792	0,90973	0,46458
0,74647	0,23946	1,24201	1,81631	1,19164	2,03337
0,95975	0,99774	1,32128	3,73165	0,97515	0,55805
0,94769	0,23529	1,21964	2,32191	1,19862	3,08582
0,84177	0,70390	1,01637	0,99511	1,07313	1,65225
0,93025	0,50977	1,21964	3,19263	0,99801	0,90606
0,83331	0,41085	1,21964	1,48575	1,05393	2,83599
0,95236	0,67458	1,21964	2,82983	0,97920	1,75472
0,95236	1,01048	1,14032	0,45184	1,03854	2,67630
0,71427	0,38309	1,01362	1,11454	1,14240	1,60357

0,90503	0,90532	1,39373	3,58795	1,14318	2,40068
0,90503	0,91484	1,01779	1,58497	1,19929	1,35627
0,67877	0,55034	1,13088	0,78535	1,14820	0,51593
0,78302	0,42378	1,24397	1,18516	0,89340	1,16312
0,67116	0,32244	1,24397	2,35604	0,81161	0,31359
0,95232	0,93574	1,35706	2,96528	0,96832	1,04172
0,74069	0,43278	1,24397	2,85580	0,86406	1,09102
0,95232	1,33733	1,13088	2,39888	1,15267	1,80182
0,74069	0,47957	1,01779	1,22800	0,94933	0,85371
0,80800	0,35263	1,01779	1,20896	0,94933	1,05893
0,93695	0,22332	1,24397	2,48455	1,00969	0,89876
0,82710	0,83525	1,15577	1,22918	0,86545	0,38518
0,64330	0,38314	1,15577	2,92026	1,15442	2,62473
0,88843	1,10799	1,23007	1,82527	1,04007	0,94471
0,78972	0,49385	1,10706	1,21276	0,81617	0,35620
0,98715	0,26117	1,10706	0,39507	1,01202	0,49724
0,97263	1,76234	1,10706	0,80238	1,02919	1,90943
0,97263	1,09011	1,10706	0,86364	1,09761	1,55206
0,97263	1,34446	1,10706	2,22953	1,04391	1,80258
0,70428	0,44243	1,12694	1,41548	1,09463	1,51751
0,80489	0,61336	1,33183	4,67110	1,04720	1,78855
0,87972	0,75609	1,12694	2,47179	1,16463	0,39510
0,87972	1,08649	1,12694	1,21732	1,11089	1,82722
0,68423	0,22744	1,31009	1,65388	1,11089	1,64675
0,74423	0,43453	1,17908	1,89438	1,11089	1,94903
0,71088	0,24128	1,04807	1,20989	1,07681	0,72289
0,66119	0,27456	1,04807	0,86579	1,09083	1,12084
0,83720	0,61102	1,04807	1,29868	1,17136	1,52332
0,83720	0,85241	1,04807	1,86848	0,93966	0,49932
0,62790	0,12824	1,32123	3,52966	1,13459	4,49306
0,78751	0,38425	1,02762	1,45247	1,00764	1,81511
0,95272	1,78425	1,37324	5,15441	1,13336	4,71581
0,83363	0,45579	1,12356	2,84293	1,04618	2,78042
0,83363	0,42800	1,24840	3,14067	1,17924	4,62225
0,97869	0,63859	1,18105	0,85662	1,14106	2,93648
0,83888	0,60261	1,29915	3,07406	1,18372	1,69213
0,90297	0,72913	1,33970	3,36924	1,14176	2,71002
0,90297	0,77400	1,33970	3,36924	0,97013	1,91868
0,97587	1,51583	1,33970	2,71239	1,01651	1,27078
0,69705	0,27642	1,17224	1,40643	1,18595	1,64683
0,97439	0,91618	1,25780	3,98230	1,11651	1,63719
0,68037	0,19434	1,30377	0,66726	1,18775	1,03395
0,68037	0,18474	1,30377	3,82431	1,19045	2,19307
0,68037	0,36468	1,10319	1,00919	1,14986	2,55275
0,97854	1,48012	1,00290	1,56856	1,08293	2,61223
0,78283	0,67068	1,30377	2,76366	1,08293	1,55689
0,68498	0,31453	1,20348	1,22829	1,05934	1,36393
0,76921	0,22537	1,20348	1,88228	1,19175	2,81956
0,91949	0,41455	1,30377	4,11645	1,13075	0,50256
0,86095	0,54604	1,25685	3,57321	1,07527	1,13653
0,76571	0,55566	1,32837	2,15888	1,08649	1,00035
0,78687	0,28950	1,08685	1,56483	1,13233	0,46535
0,92559	0,40473	1,20761	2,27769	1,08800	0,34332
0,99801	0,61040	1,22320	0,96202	1,14095	0,40325
0,85544	0,63901	1,29284	1,44862	1,07876	2,47092
0,68819	0,22516	1,29284	1,26754	0,96073	1,88094
0,83832	0,57003	1,24821	2,96881	1,15019	1,65543
0,85973	0,59059	1,09219	2,17505	1,14594	2,12455
0,85973	0,41148	1,24821	2,11879	1,14594	2,75349
0,84946	0,37356	1,09219	1,22503	0,90406	0,41654
0,84946	0,61638	1,24821	2,23130	1,14240	1,89801
0,99104	0,70977	1,13517	1,62697	1,06429	2,55749
0,94608	1,00153	1,32437	2,02814	1,15267	1,91522
0,82416	0,66927	1,13517	0,92492	1,15267	1,80182
0,61812	0,26987	1,32437	2,29559	1,08936	1,14676
0,98117	1,11714	1,32437	2,11729	1,14058	2,09825
0,73588	0,41286	1,13517	1,53782	1,14058	1,73106
0,98117	0,76500	1,32437	2,02814	1,06135	1,13564
0,73588	0,18518	1,07167	0,32201	1,10328	1,72364
0,91325	0,75639	1,17883	3,45099	1,14318	2,80880
0,94423	0,61387	1,06120	1,01851	1,14318	0,60977
1,02243	1,64012	1,06135	1,03240	1,14318	1,62766
1,06543	4,33038	1,36459	4,12959	1,13767	1,31390
1,16904	3,90873	1,25225	1,80449	0,97515	1,46224
1,06600	3,77891	1,25225	2,96199	0,81371	0,30372
0,97717	2,21244	1,35391	0,80300	1,16291	1,56303
1,15483	4,72249	1,21640	1,93441	1,11089	1,80466
1,02243	1,64012	1,21640	1,10538	1,12804	3,38982
1,06543	4,33038	1,32868	2,98613	1,00807	1,63161
1,16904	3,90873	1,32868	0,71476	1,00807	0,95341
1,06600	3,77891	1,32868	2,04899	1,15209	1,79870
0,97717	2,21244	1,16140	1,76801	1,15209	2,65382
1,15483	4,72249	1,13574	2,93644	1,04924	0,74796

1,06600	3,50668	1,38813	3,81935	0,81617	0,31064
1,06600	3,68202	1,38813	2,51317	1,00969	1,31850
0,91153	0,42622	1,38813	2,42058	1,11483	2,48056
0,82038	0,89731	1,26194	3,03233	1,10749	1,24179
0,96575	1,76079	1,27563	3,12043	0,98831	1,41161
1,04277	0,25933	1,13389	2,43637	1,11338	2,29909
1,04277	0,99248	1,13561	1,55971	1,02118	0,96043
1,04277	2,76996	1,13561	1,83372	1,12946	1,46994
0,85318	1,62609	1,13561	1,87587	1,17033	2,28732
1,11823	2,98254	1,18073	1,94263	1,17033	0,60789
0,86973	0,97524	1,18073	1,56358	1,18595	1,98992
1,11823	1,79268	1,18073	1,48461	1,18865	3,24982
1,11823	1,64119	1,24201	2,65960	1,12356	1,70320
0,99398	1,64119	1,24201	1,74712	1,19680	2,69566
1,08372	1,55137	1,38001	4,86512	1,18551	1,42158
0,96331	1,94783	1,10401	2,07578	0,90189	1,61615
1,08372	2,73501	1,14908	2,27690	1,09627	1,25146
1,08372	0,39359	1,25338	2,67621	0,83609	0,36064
1,08372	0,83889	1,00270	1,20527	0,83646	0,35221
1,08372	2,91887	1,25338	0,56051	1,11651	0,50100
1,11823	3,57905	1,37872	2,13838	0,97695	0,96621
0,99398	1,62541	1,37872	3,74216	1,05778	1,33509
0,99398	1,06993	1,37872	3,96572	1,19175	1,40978
0,99398	0,71329	1,12804	1,79818	1,05934	1,24932
0,86973	0,64385	1,30477	2,85787	1,19862	2,04021
0,99398	1,87474	1,30477	2,80773	1,19862	0,44205
0,98284	1,60324	1,30832	2,93645	1,19862	3,51937
0,84244	0,29605	1,14478	1,02200	1,19862	0,88976
1,12325	1,76720	1,02471	0,50001	1,19862	2,11105
0,84244	0,69231	1,19000	1,14796	1,18168	1,51987
0,98284	1,16144	1,02000	0,63057	1,01287	1,23489
0,98284	1,44838	1,25884	2,53882	1,03740	2,23778
1,00028	0,90266	1,10149	1,57714	0,93599	1,14475
1,14318	2,49671	1,31907	2,46075	1,06971	1,34538
0,85738	1,10911	1,02595	0,75636	1,19355	5,49974
1,11528	1,83683	1,31907	4,09779	1,09612	1,97678
0,83646	0,70441	1,17251	1,90643	1,16291	2,98113
1,11528	2,08649	1,17251	2,69387	1,05473	1,23836
0,83646	1,11012	1,02595	1,15008	0,91512	0,73644
0,97587	1,85020	1,08455	0,61226	0,99801	1,20173
1,15902	1,89773	1,30266	1,24615	0,99914	1,83745
1,03024	1,19135	1,24666	2,53753	1,15784	1,79381
0,85089	0,28372	1,05334	1,57755	1,08494	2,21636
0,99595	1,13345	1,33142	5,38045	1,17575	0,43059
0,87145	0,64134	1,24873	2,49203	1,17575	1,22757
1,12044	3,00031	1,23200	2,69235	1,15209	1,53332
1,17683	3,62682	1,38719	3,84617	1,15209	1,26794
0,96286	2,19423	1,54966	10,71516	1,00807	1,88716
0,96286	1,24924	1,26791	6,07300	1,15209	1,66601
0,85587	1,75699	1,37699	6,42279	1,00969	1,36295
1,06984	2,36952	1,54758	9,11916	1,19123	3,33320
0,96286	1,18879	1,54758	8,88491	1,19123	4,74798
0,99216	1,26504	1,48033	7,31492	0,95780	0,87678
0,85042	1,04014	1,34199	7,40490	1,13767	1,45518
0,85042	0,83399	1,34199	1,31236	1,10231	3,07830
1,06831	1,75474	1,34199	2,92299	0,97996	0,57353
0,91569	0,46208	1,20779	2,82357	0,94107	2,40037
1,06831	1,07624	1,34199	5,46817	1,06978	2,56449
0,91569	0,46793	1,20779	3,40419	1,12356	2,68926
1,06831	1,12303	1,54917	7,32151	1,13279	1,92678
0,96913	0,52005	1,42007	7,93045	0,93338	0,47079
1,14058	1,64522	1,29098	5,43802	0,93338	1,10264
1,14058	2,78972	1,29098	1,26746	1,05934	1,16909
0,99801	1,45924	1,42007	2,83230	1,11651	1,91453
0,85544	0,65809	1,29098	3,79175	0,84728	0,96877
1,01146	0,88541	1,54917	2,83230	1,06540	0,82394
1,12723	1,37640	1,55170	7,84909	1,11089	2,11145
1,16248	1,06508	1,55170	6,00224	0,81193	0,67019
1,16355	0,94804	1,43234	6,25688	1,16463	3,24915
1,06857	0,78078	1,43234	10,98592	1,04817	2,25621
1,00660	0,96669	1,59848	1,13156	1,10425	2,32544
1,13041	0,91332	1,48431	1,95941	1,13313	1,90774
1,06157	1,25725	1,48431	5,87823	1,17757	1,42572
1,06157	1,34953	1,48431	2,98320	1,18571	2,62143
1,06157	2,26843	1,41993	4,37957	1,14058	3,00431
1,14124	2,86524	1,41993	5,15243	1,05473	1,02447
1,14124	0,49320	1,59742	2,72343	1,15394	1,03703
1,01444	1,38229	1,59742	7,56303	1,09814	1,73517
1,14124	0,53010	1,41993	7,02019	1,07668	2,69445
1,15024	2,36720	1,24244	4,18635	1,18775	0,98289
1,00646	1,34989	1,59742	6,48654	1,14329	1,46251
1,15024	2,39655	1,59742	8,77753	1,19000	2,00835
1,15024	2,15200	1,52274	9,07794	0,98073	1,61684

0,86268	1,11513	1,33239	3,67657	1,14866	2,72990
1,11338	0,91473	1,44367	7,13120	0,93802	0,57217
1,09219	1,38753	1,28326	6,85953	1,07520	1,43811
1,09219	1,16252	1,23929	4,59691	0,94484	0,78835
0,93616	0,48751	1,23929	6,97700	0,89123	1,09961
0,87045	1,10031	1,37699	5,06520	1,14188	1,67954
1,16060	1,76350	1,42315	2,42702	1,14188	1,60777
0,98505	0,88955	1,30600	6,92771	1,07161	0,74058
0,84433	0,38058	1,46928	10,37581	1,18168	1,56736
1,02369	2,26646	1,20214	3,45860	0,89734	0,65631
1,13743	2,94204	1,20214	3,76446	0,94074	0,98635
1,13743	1,17682	1,33571	1,31756	1,04563	2,43799
1,12880	2,99537	1,46928	3,21548	1,14329	1,31912
1,12880	0,56394	1,20214	2,54886	1,09904	0,36916
1,12880	1,52542	1,20214	2,84688	1,07681	0,74191
0,98770	0,87827	1,50136	0,89098	1,04391	1,31470
1,17251	1,69403	1,50136	5,17882	1,00652	1,78601
0,87645	1,45889	1,50136	11,61057	1,18808	2,23974
0,97384	0,51365	1,35122	6,51528	1,01325	1,06815
1,07122	1,25373	1,35122	6,51528	1,01925	0,24348
0,97384	1,06377	1,35122	5,03403	1,02736	0,20135
0,87645	0,88901	1,35122	2,22188	1,05867	1,29271
1,01597	1,60485	1,37454	3,37647	1,08331	1,97689
1,15538	2,82200	1,52727	6,31917	1,05187	2,07794
0,94531	1,95252	1,52727	8,26533	1,00511	0,79626
0,84028	1,05825	1,37454	7,26880	1,10328	0,35357
1,19509	3,33526	1,22182	3,13614	1,04563	1,43345
1,09550	2,52095	1,22182	1,61789	1,16836	2,41917
0,99591	0,26331	1,37454	2,86062	1,14177	0,38453
0,89632	1,29705	1,29699	6,60887	1,10749	2,74726
0,85292	1,27448	1,58521	7,73168	1,06374	0,20976
1,13723	1,61341	1,58521	12,81884	1,12692	2,26121
1,04246	2,57138	1,29699	5,18565	1,00652	1,70409
1,04246	2,11761	1,51068	6,40185	1,06535	2,27345
1,13723	3,15680	1,51068	4,20553	1,06736	1,03750
0,94769	1,80669	1,38479	6,38216	1,06736	1,97620
0,97976	1,94994	1,25890	1,08339	1,06978	0,41728
1,17643	0,70047	1,25890	1,91727	1,04672	2,29256
1,18595	3,97984	1,25890	0,51215	1,00178	1,28209
1,06736	1,72917	1,25890	2,28497	1,08894	1,80935
1,06736	2,36320	1,59006	3,86607	1,00980	1,79892
0,83017	1,09789	1,59006	3,14645	1,19123	1,14729
1,05020	2,52828	1,59006	2,43286	1,08331	1,58988
1,05020	1,01131	1,59006	2,38468	1,03740	0,92989
1,05020	1,68367	1,34544	2,69481	1,23539	2,94112
0,90017	0,76682	1,59006	8,17777	1,05934	1,54350
1,17161	0,83325	1,46775	10,86355	1,04563	2,84432
1,14378	0,94613	1,45418	8,61375	1,10658	0,35898
0,95315	0,85494	1,34232	5,94211	1,22090	2,82582
1,14378	1,86946	1,45418	10,53918	1,00028	0,92186
1,06877	2,90168	1,34232	6,30140	1,33856	2,74277
1,18752	2,61234	1,23046	4,33221	1,09590	0,74198
1,18752	2,97608	1,23046	2,15574	1,13075	0,46013
0,95002	1,86832	1,45418	9,07898	1,18372	2,56002
1,01440	0,28684	1,23046	5,99508	1,07520	0,85488
0,91296	1,11300	1,45418	5,52754	1,06736	1,02927
1,11584	0,96357	1,34232	3,39022	1,00807	0,43247
0,81152	1,07178	1,28434	6,74220	1,29818	0,66666
1,11584	0,31260	1,44869	0,81316	1,30751	1,87915
0,81152	1,37064	1,34521	1,45128	1,24104	1,54050
1,14882	2,94120	1,26084	4,72332	1,02304	2,19011
0,88371	1,46492	1,54103	3,73251	1,02403	0,91699
1,19582	5,04515	1,26084	2,51548	1,08649	0,30601
0,96575	2,06019	1,40093	4,41567	1,30560	1,57671
1,13024	3,45367	1,49957	5,81895	1,16836	3,95276
1,07813	2,63172	1,38422	7,29894	1,13381	1,97642
1,15514	4,95683	1,26886	5,37444	1,04563	1,40147
1,15514	4,31355	1,49957	4,08134	1,04633	0,68067
1,15514	5,51894	1,34436	4,56797	1,04720	3,03276
1,00485	2,27798	1,34436	4,29467	1,04924	0,75676
1,01291	2,66200	1,51240	1,15566	1,04924	0,65117
0,81102	0,13058	1,34436	2,81106	1,11338	2,29909
0,98452	0,26851	1,34436	2,64708	1,01097	1,73173
1,07589	3,50901	1,52845	3,28116	1,20541	0,68673
0,82761	0,15390	1,52845	4,18901	1,33307	2,09792
0,82761	1,24242	1,27370	2,01290	1,30209	2,82749
0,90548	1,39506	1,29139	2,01283	1,12200	2,69837
0,89319	1,73370	1,24018	5,35766	1,02030	1,99591
0,89319	1,43770	1,24018	1,26631	1,06736	1,50411
0,94460	0,34512	1,27678	2,29264	1,25639	2,34961
1,17443	3,55395	1,56051	1,55035	1,06948	0,72686
1,17619	4,44259	1,41301	1,65488	1,07140	1,49906
0,91938	0,44178	1,47090	4,46073	1,07161	0,71246

0,98844	2,08015	1,47090	2,01218	1,20727	2,19241
1,09724	3,52101	1,36690	1,69266	1,01546	1,95185
0,99749	1,54330	1,36690	1,51756	1,00969	1,37776
0,92415	1,81181	1,37638	2,09499	1,08214	1,44172
1,02683	2,51195	1,37638	2,86594	1,08293	0,33645
1,13381	3,41987	1,20433	1,55867	1,14594	1,78284
1,13381	2,60932	1,37638	3,68718	1,08894	1,41926
0,94669	2,17793	1,20433	2,74862	1,17757	2,04457
1,14309	3,64109	1,51801	2,94069	1,13794	3,01291
1,04783	0,26028	1,38001	2,52554	1,03740	1,36082
0,86382	0,87832	1,24201	4,17752	1,02403	1,06124
1,07977	0,70846	1,38001	3,11368	1,01287	0,64911
1,16473	2,05107	1,24201	2,24877	1,09846	2,23396
1,16473	1,65062	1,24201	3,84020	1,09846	3,03920
0,96532	2,13803	1,51801	3,41639	1,10196	1,59806
1,17984	1,64464	1,38001	2,54284	1,29818	3,06717
1,07258	2,88320	1,24201	2,33526	1,01238	2,99652
0,85807	1,11673	1,24201	3,63262	1,04662	1,69500
0,99536	1,47054	1,42291	3,21855	1,10831	2,90389
0,99536	1,33110	1,52043	4,66233	1,11010	1,47986
0,87094	0,80816	1,47015	3,23182	1,23539	1,49848
1,16021	1,84718	1,24397	1,66589	1,11240	0,76549
1,03130	1,29020	1,35706	0,48311	1,07115	2,78534
0,90239	1,35366	1,35706	2,51311	1,05817	1,57793
0,87025	1,15088	1,47015	8,09383	1,07405	1,23883
1,11889	0,47426	1,24397	2,39888	1,05378	0,76720
1,04055	1,25309	1,24397	4,34082	1,12200	1,75476
0,86712	0,63513	1,26084	2,17588	1,12200	1,66179
1,03370	0,67316	1,36591	4,32504	1,12356	2,32429
1,17852	2,12018	1,59909	8,61798	1,12356	1,17175
1,16607	0,99045	1,35307	2,11928	1,05867	2,05919
0,97173	0,86966	1,23007	2,32753	1,19100	1,44143
1,00563	0,26273	1,33183	1,08285	1,28644	3,73024
1,00563	0,99068	1,43428	6,01581	1,25213	3,95388
0,90507	1,58140	1,33183	3,56171	1,00170	1,09507
0,80451	0,87856	1,53673	1,28986	1,20252	2,45900
0,90507	0,26273	1,31009	0,60679	1,06978	0,98655
1,00563	1,95793	1,57211	4,66194	1,19045	1,91547
1,16716	2,57386	1,31009	2,05717	1,13233	1,69098
0,87537	1,28239	1,31009	4,62864	1,13279	0,89695
1,06989	2,31648	1,46803	4,24287	1,13279	0,86373
0,87537	1,67604	1,49808	6,37418	1,04633	0,69812
1,18465	3,91608	1,49808	1,86327	1,19475	2,02049
1,00239	2,40568	1,49808	3,59208	1,33713	0,62155
1,02116	1,27908	1,41726	1,04637	1,19123	1,43777
0,91904	1,61899	1,41726	4,36711	1,08293	1,32910
0,81693	0,85505	1,41726	7,23515	1,19164	2,03337
1,02116	0,29086	1,41726	1,61835	1,33856	1,24707
1,02116	2,27780	1,50716	1,13596	1,19862	3,08582
1,10991	1,32291	1,50716	8,65493	1,34141	2,99868
1,10991	2,57383	1,45131	1,41288	1,07313	1,65225
0,86731	1,63019	1,35455	7,43998	1,20727	3,30848
0,96368	0,25182	1,35455	5,29532	1,05393	2,83599
0,86466	0,91927	1,20348	2,03332	1,03854	2,67630
1,05680	0,84923	1,40026	2,20291	1,14240	1,60357
1,15057	2,91872	1,44913	2,22553	1,14318	2,40068
1,11448	2,71208	1,44913	3,69183	1,19929	1,35627
0,86682	0,78738	1,44913	4,33515	1,14820	0,51593
1,16263	1,96773	1,36861	5,78076	1,15267	1,80182
0,83045	0,94994	1,36861	4,18344	1,00969	0,89876
1,16263	2,30699	1,42707	3,84809	1,15442	2,62473
0,99654	0,61821	1,42707	2,53751	1,04007	0,94471
0,83632	0,73243	1,50831	1,61323	1,32104	2,44503
1,17202	1,88085	1,29284	1,38277	1,01202	0,49724
1,05482	1,35633	1,40424	4,38759	1,22506	3,06262
1,14355	1,83626	1,56026	7,75016	1,02919	1,90943
1,14355	2,07592	1,40424	4,95010	1,09761	1,55206
1,14355	3,34847	1,24821	3,78758	1,04391	1,80258
1,01649	1,77212	1,40424	3,32507	1,25021	0,90932
0,88943	0,58733	1,24821	2,25005	1,09463	1,51751
1,03266	1,75240	1,40424	2,32505	1,04720	1,78855
1,03266	2,08796	1,24821	2,15629	1,16463	0,39510
0,80318	0,70096	1,51356	3,64397	1,11089	1,82722
1,14740	4,02679	1,51356	5,29323	1,11089	1,64675
1,19135	4,64098	1,32437	2,22873	1,11089	1,94903
1,07222	2,04504	1,32437	2,31788	1,07681	0,72289
1,07222	2,25928	1,32437	2,45160	1,09083	1,12084
1,07222	0,40066	1,51356	2,38474	1,24666	0,75968
1,19135	2,10068	1,32437	3,07565	1,17136	1,52332
1,19135	3,28040	1,32437	2,25102	1,35893	4,18831
0,97338	1,93844	1,28600	2,04548	1,23539	3,88117
0,85171	1,45235	1,22349	1,55779	1,13459	4,49306
1,09506	0,78842	1,55717	5,65150	1,00764	1,81511

0,97338	0,99590	1,44594	7,78666	1,13336	4,71581
0,85171	0,58687	1,57905	0,91022	1,04618	2,78042
1,11227	3,05670	1,21297	2,01318	1,25664	2,33418
1,16987	0,92850	1,21297	4,12959	1,23420	4,56237
0,82782	0,94807	1,56532	0,89383	1,17924	4,62225
0,93130	1,14863	1,35661	3,90818	1,14106	2,93648
0,93130	1,09393	1,32868	2,77434	1,18372	1,69213
1,13826	0,64907	1,32868	3,44146	1,30209	4,14844
1,13826	2,55980	1,47631	3,21909	1,14176	2,71002
1,00015	1,76141	1,40773	1,84893	1,01651	1,27078
0,88903	1,15169	1,54854	2,67323	1,18595	1,64683
1,19721	3,13123	1,41949	2,97026	1,30455	3,24975
1,08837	3,15033	1,41949	5,23331	1,11651	1,63719
1,08837	2,84272	1,29045	2,03675	1,18775	1,03395
0,87070	1,09254	1,54854	6,71844	1,23703	3,68624
1,19721	3,07608	1,54854	7,00132	1,19045	2,19307
0,97954	1,73745	1,38813	1,61702	1,14986	2,55275
1,07478	2,96228	1,38813	3,33325	1,08293	2,61223
0,85983	0,66804	1,26194	1,94440	1,08293	1,55689
1,12917	2,12529	1,26194	3,46552	1,05934	1,36393
0,87824	1,26738	1,41737	2,88617	1,19175	2,81956
1,00370	1,22838	1,27563	1,96784	1,13075	0,50256
1,00370	1,16989	1,27563	2,60505	1,07527	1,13653
0,87824	1,26088	1,27563	1,71483	1,08649	1,00035
1,12917	0,89041	1,41737	1,44308	1,13233	0,46535
1,00370	1,12114	1,29784	0,91334	1,08800	0,34332
0,87824	1,04315	1,29784	0,88524	1,14095	0,40325
0,87824	0,64344	1,29784	1,50351	1,07876	2,47092
0,87824	0,63044	1,51809	4,26431	1,15019	1,65543
1,08999	1,84151	1,34941	1,70572	1,25475	3,31838
0,96888	0,96460	1,38001	2,61203	1,20269	1,71920
0,93176	1,47900	1,51801	3,02719	1,14594	2,12455
1,08706	1,15855	1,38001	2,75041	1,14594	2,75349
0,98079	1,50092	1,24201	2,24877	1,33713	0,64515
1,11661	0,36425	1,49381	4,49387	1,14240	1,89801
1,17619	2,80597	1,50405	1,90510	1,34141	1,22330
1,05857	1,83406	1,59472	4,11132	1,20727	1,62048
0,94095	0,98798	1,44974	3,63501	1,06429	2,55749
0,94095	0,97995	1,30477	2,36651	1,15267	1,91522
1,17619	2,36152	1,44974	4,94862	1,15267	1,80182
1,11523	1,81447	1,30477	4,10630	1,08936	1,14676
1,11523	0,76231	1,44974	2,88795	1,14058	2,09825
1,11523	2,98989	1,30477	4,31688	1,14058	1,73106
1,13347	1,08716	1,23624	2,09484	1,27577	1,95439
0,94456	0,22742	1,54530	0,95330	1,06135	1,13564
0,85010	1,27159	1,23624	3,24852	1,10328	1,72364
1,06956	0,27227	1,23624	2,09484	1,14318	2,80880
0,84325	1,25465	1,30832	2,39666	1,14318	0,60977
1,11837	1,23817	1,47185	1,06518	1,14318	1,62766
1,15576	5,22326	1,47185	2,80690	1,13767	1,31390
1,14850	3,81920	1,30832	2,50462	1,21925	2,20920
1,11355	0,99928	1,36000	0,94585	1,22054	3,02248
0,95359	1,44967	1,36000	2,69204	1,16291	1,56303
0,85823	0,95028	1,25884	2,34648	1,11089	1,80466
1,14430	2,77378	1,25884	1,53868	1,12804	3,38982
0,89151	1,87127	1,46564	5,92652	1,00807	1,63161
1,08963	3,50263	1,31907	3,03060	1,00807	0,95341
0,91061	0,22240	1,46564	2,56436	1,15209	1,79870
0,83751	1,10454	1,31907	2,73532	1,15209	2,65382
1,11668	1,59117	1,31907	2,05149	1,04924	0,74796
1,10280	2,22222	1,31907	1,97378	1,22506	2,24094
0,82710	1,12643	1,46564	0,83406	1,22547	2,95552
0,85292	1,42434	1,31907	2,88037	1,00969	1,31850
0,94769	1,79268	1,31907	1,95824	1,11483	2,48056
0,99828	1,39474	1,44683	1,87588	1,23049	1,32926
0,89845	1,34072	1,26531	0,90381	1,10749	1,24179
0,92490	1,41443	1,41673	1,77629	1,29818	3,70436
1,09146	1,46745	1,30266	1,39771	1,11338	2,29909
0,97019	1,45277	1,48504	0,91612	1,32104	1,85229
1,06263	1,12825	1,24666	3,45773	1,32104	0,94837
0,91083	0,47778	1,42939	2,94219	1,02118	0,96043
1,07536	1,55706	1,31668	0,60848	1,12946	1,46994
1,17509	3,34011	1,32697	5,12128	1,30209	0,94977
1,15147	3,81480	1,44237	6,10413	1,17033	2,28732
1,15147	1,83331	1,24873	1,30535	1,17033	0,60789
1,15147	2,08487	1,38600	3,19717	1,24450	0,78052
1,15147	1,48870	1,38849	3,55187	1,18595	1,98992
1,15147	1,80574	1,54966	8,88866	1,33118	2,66100
1,02353	1,16822	1,40879	4,80319	1,33118	1,71335
0,84112	0,36267	1,51468	6,04902	1,18865	3,24982
1,13929	2,24838	1,23929	3,00733	1,12356	1,70320
1,13929	0,38690	1,54758	7,36226	1,19680	2,69566
0,96501	0,24399	1,47619	8,01734	1,29760	4,88180

1,15801	3,12309	1,47619	4,19956	1,18551	1,42158
1,06151	3,23843	1,34199	1,24873	1,37734	3,10108
1,06151	0,83401	1,34199	3,10195	1,09627	1,25146
1,02718	3,26716	1,47619	5,26138	1,11651	0,50100
0,97163	2,16621	1,34199	5,82211	1,05778	1,33509
0,80669	1,33893	1,20779	2,69631	1,32333	1,84183
1,16521	4,30472	1,54917	5,70355	1,32333	4,48445
1,08387	0,69560	1,42007	6,11778	1,19175	1,40978
0,97548	2,07843	1,29098	3,51206	1,05934	1,24932
0,86709	0,85484	1,29098	1,18957	1,25815	1,99247
1,19226	1,91710	1,42007	3,00932	1,19862	2,04021
1,10831	2,06125	1,29098	3,44479	1,19862	0,44205
1,10831	1,89790	1,54917	5,32473	1,19862	3,51937
0,92359	1,49343	1,43234	5,38383	1,19862	0,88976
0,80588	1,33965	1,55170	5,37264	1,19862	2,11105
0,99604	1,78359	1,55170	6,58428	1,26277	4,74181
0,95113	0,47856	1,22312	3,90823	1,18168	1,51987
0,85602	1,31391	1,25595	1,30056	1,01287	1,23489
1,08387	1,65520	1,37013	3,03464	1,03740	2,23778
1,19226	3,92220	1,25595	4,86913	1,06971	1,34538
1,08387	0,69141	1,37013	4,87158	1,33856	1,98900
0,94385	0,23521	1,24666	2,85523	1,34141	1,76346
0,84946	0,81630	1,59742	4,60038	1,20727	4,00354
0,84946	1,06534	1,41993	2,95345	1,34141	4,11475
1,02365	2,28749	1,24244	2,56701	1,33189	3,45578
0,92129	1,36614	1,59742	5,79648	1,35284	4,39266
0,81892	1,03784	1,41993	5,06042	1,19355	5,49974
1,13676	4,09333	1,24244	2,29099	1,09612	1,97678
0,82673	1,29665	1,59742	5,74128	1,16291	2,98113
1,12160	2,56315	1,33239	5,27655	1,27991	4,75911
1,18484	0,42970	1,52274	6,12761	1,28042	1,93355
0,94787	1,72429	1,33239	2,79147	1,05473	1,23836
1,06635	0,43518	1,28326	3,25998	1,28109	2,13144
0,94787	1,78997	1,51468	5,56785	1,28116	1,99746
0,82939	0,72256	1,23929	0,65302	1,28154	4,43006
1,18484	0,90320	1,51468	6,44427	1,35268	0,66791
1,06639	0,30331	1,37699	4,56254	1,28562	1,44221
1,06639	1,30105	1,24525	4,02959	1,39364	2,71050
1,06639	0,32925	1,42315	5,61364	1,15784	1,79381
0,85311	1,42477	1,24525	2,89019	1,35472	1,86555
1,08227	2,16320	1,30600	1,18761	1,08494	2,21636
0,84177	1,17889	1,43660	2,84073	1,22188	0,56412
1,19226	2,11735	1,56720	6,16896	1,34640	4,52518
1,19226	0,80046	1,46928	6,96426	1,35360	3,20105
0,99355	0,89084	1,20214	2,96452	1,17575	0,43059
1,19604	1,11223	1,33571	2,52533	1,17575	1,22757
1,19604	2,13177	1,33571	3,55271	1,15209	1,53332
1,19604	3,27103	1,20214	1,99203	1,15209	1,26794
1,07140	2,48733	1,20109	1,78196	1,00807	1,88716
1,19045	4,15296	1,35122	0,79074	1,15209	1,66601
1,07140	2,21528	1,50136	3,45254	1,29610	1,79870
1,07140	2,27358	1,50136	4,94493	1,21563	5,95396
0,83331	0,98827	1,50136	7,29489	1,23539	1,46125
0,95236	1,38802	1,35122	4,63309	1,23539	0,48708
0,90503	1,38180	1,20109	3,03490	1,29760	4,06817
1,13129	0,36213	1,20109	3,30776	1,29818	3,01231
1,01816	1,90116	1,50136	1,69286	1,00969	1,36295
1,13129	0,38357	1,35122	4,27670	1,24625	4,47893
1,11860	3,84164	1,37454	0,82653	1,23709	2,24301
1,11860	2,67164	1,52727	4,22059	1,19123	3,33320
1,00674	2,32157	1,37454	6,14331	1,19123	4,74798
1,16394	2,77213	1,37454	4,43162	1,13767	1,45518
1,05813	2,85205	1,22182	0,67412	1,10231	3,07830
0,84651	1,51473	1,37454	3,00131	1,35932	3,89025
1,16394	3,13083	1,37454	5,04713	1,35932	6,21914
1,05813	1,68433	1,22182	3,48199	1,06978	2,56449
0,95232	1,63754	1,22182	0,79136	1,22071	1,74530
1,11100	1,18673	1,52727	8,18912	1,12356	2,68926
0,80800	0,70526	1,44110	5,75198	1,24840	0,51544
0,84325	1,12607	1,29699	3,99881	1,24840	0,47702
1,10280	0,75096	1,58521	9,73109	1,26586	3,74035
0,98715	2,15900	1,38479	5,17073	1,22411	1,75992
1,08586	0,28491	1,51068	6,17533	1,22204	3,75204
0,97263	2,38007	1,38479	4,17598	1,26053	4,18471
1,12939	0,78603	1,25890	3,14840	1,31849	5,56241
1,12939	3,66540	1,25890	1,87788	1,38202	1,62515
0,94116	2,53505	1,25890	1,74656	1,20091	2,22293
1,11404	1,87681	1,46775	5,69674	1,27880	5,76586
0,80489	0,67034	1,22312	3,79381	1,13279	1,92678
1,00611	0,28322	1,34544	3,45658	1,32333	2,66931
0,97747	2,01316	1,22312	2,60147	1,05934	1,16909
0,97747	0,25818	1,59006	6,49163	1,26793	2,09162
0,93029	1,71694	1,59006	8,38252	1,11651	1,91453

0,83726	1,15523	1,34232	4,28384	1,21724	4,57982
1,08348	3,67953	1,45418	6,92785	1,06540	0,82394
1,08348	3,53801	1,23046	1,48322	1,26933	0,52161
0,91399	1,56832	1,34232	4,44506	1,11089	2,11145
1,03901	0,51307	1,45418	5,83846	1,27589	4,77350
0,98083	2,45940	1,45418	5,77167	1,25837	5,33127
0,83720	0,76944	1,23046	1,41874	1,27920	1,82180
0,94185	1,43892	1,45418	7,65795	1,27991	4,13441
1,12501	2,53039	1,23046	4,24930	1,29303	4,66697
0,90001	0,99341	1,45418	6,30140	1,16463	3,24915
1,01251	2,53039	1,23046	2,66013	1,04817	2,25621
1,12501	3,19579	1,28434	5,73220	1,28644	5,29126
1,12501	1,54635	1,26084	4,14874	1,29120	5,42217
1,19090	2,89037	1,26084	2,66931	1,10425	2,32544
1,19090	2,08440	1,38422	4,04599	1,34141	0,61959
1,07181	2,56798	1,38422	6,30386	1,34141	5,36188
1,05347	1,00957	1,26886	3,51056	1,23156	2,77116
1,05347	2,08645	1,38422	4,29349	1,13313	1,90774
0,90297	0,80766	1,34436	3,31080	1,17757	1,42572
1,11528	1,97949	1,51240	2,29570	1,34580	2,77310
0,96049	1,05303	1,51240	5,46595	1,34580	3,79147
1,12057	1,22853	1,51240	2,92819	1,34640	5,52923
0,96049	0,51301	1,52845	7,80339	1,18571	2,62143
0,92318	0,71466	1,40108	4,72624	1,35050	2,63602
1,10782	0,81823	1,40108	5,75309	1,35413	4,48190
1,13679	1,35313	1,35292	5,28220	1,35413	3,68082
0,97439	0,55676	1,35292	3,03726	1,14058	3,00431
1,13679	1,40951	1,56051	1,59733	1,35608	1,62113
1,06135	1,54833	1,41865	2,63090	1,35608	0,76553
1,02055	2,24567	1,27678	2,34902	1,05473	1,02447
1,13394	1,42034	1,47090	2,01218	1,22056	0,58693
1,02055	1,25719	1,47090	3,44252	1,28607	3,07287
0,90554	1,01525	1,47090	2,03642	1,23709	2,61685
1,03491	1,70990	1,59472	2,02341	1,23709	3,68851
0,90554	0,74096	1,59472	3,54097	1,23709	0,46106
0,88068	0,78940	1,41150	3,31877	1,36118	1,23667
1,15382	0,46461	1,37638	2,07823	1,29818	0,61199
1,15382	1,27940	1,37638	2,84080	1,30455	2,36046
0,89741	0,70038	1,37638	3,21790	1,29610	0,66346
0,89741	0,62410	1,54843	5,32127	1,29610	0,69786
0,91231	0,69940	1,54843	3,88830	1,30949	2,26247
1,04125	1,26730	1,37638	3,60338	1,29818	2,52837
1,07274	1,54569	1,51801	4,02183	1,15394	1,03703
1,07274	1,18444	1,38001	2,33526	1,09814	1,73517
0,86095	0,58804	1,38001	2,81096	1,37324	2,93897
0,82038	1,30110	1,38001	2,56013	1,26053	3,18930
0,98448	1,91466	1,38001	3,15692	1,37734	3,86666
0,91558	1,49482	1,24201	1,81631	1,37734	2,19660
1,05095	1,53694	1,51801	2,29634	1,27147	1,26837
1,07985	1,18399	1,32128	3,73165	1,26793	1,26253
0,92559	0,50138	1,21964	2,32191	1,07668	2,69445
0,92559	0,47118	1,21964	3,19263	1,18775	0,98289
1,14058	1,53077	1,21964	1,48575	1,31295	1,85445
0,99801	0,90606	1,21964	2,82983	1,14329	1,46251
0,85544	0,37673	1,52043	1,26515	1,19000	2,00835
0,99801	1,54508	1,52043	4,97025	1,31662	0,74183
0,98313	0,74115	1,39373	3,58795	1,32417	3,58367
0,83832	0,15996	1,24397	1,18516	1,33144	1,93753
1,03512	0,67593	1,24397	2,35604	1,26933	2,52394
0,86260	1,19978	1,35706	2,96528	1,23156	3,34618
1,03512	0,66748	1,47015	6,47316	1,21791	2,89235
1,14631	1,72820	1,24397	2,85580	1,35628	6,38839
1,00302	1,52488	1,24397	2,48455	1,35413	5,77138
0,85973	0,86168	1,59909	6,94583	1,34640	4,44848
1,13262	2,59158	1,23007	1,82527	1,14866	2,72990
1,13262	1,45689	1,33183	4,67110	1,29952	4,51393
0,84946	0,39691	1,31009	1,65388	1,34141	3,21713
1,18261	3,69857	1,32123	3,52966	1,07520	1,43811
0,94608	0,95526	1,37324	5,15441	1,24241	4,59236
0,94608	1,23830	1,24840	3,14067	1,28648	1,51353
1,13322	1,54724	1,49808	3,45762	1,27477	2,46884
1,13322	2,84260	1,53536	2,68370	1,27477	4,15682
1,03020	2,05638	1,53536	6,48426	1,35893	4,77777
0,82416	1,12265	1,29915	3,07406	1,35893	3,99596
1,18451	2,07074	1,33970	3,36924	1,23539	3,81601
1,05290	2,13826	1,33970	3,36924	1,36080	2,53897
1,05290	1,86067	1,33970	2,71239	1,36080	5,07793
1,02415	0,66286	1,45131	8,03911	1,28316	2,61328
1,19485	1,63669	1,25780	3,98230	1,28316	2,83741
1,02415	0,68741	1,40406	2,01175	1,14188	1,67954
1,18327	3,18415	1,30377	0,66726	1,14188	1,60777
1,10382	1,86696	1,30377	3,82431	1,07161	0,74058
0,85853	0,83786	1,30377	2,76366	1,36118	3,09167

1,10382	1,91250	1,20348	1,22829	1,37513	3,74396
0,85853	1,44196	1,20348	1,88228	1,21717	5,51805
1,08256	2,70556	1,30377	4,11645	1,18168	1,56736
1,17418	1,01583	1,40026	1,86045	1,35050	1,03699
1,04372	1,30450	1,25685	3,57321	1,37324	3,47362
1,04372	1,19487	1,44913	3,32671	1,25628	1,65503
1,12784	2,71949	1,32837	2,15888	1,23146	1,55544
1,01505	2,18125	1,20761	2,27769	1,25213	2,43887
0,96000	0,57289	1,49303	2,94742	1,29610	5,39611
1,01081	1,40369	1,42707	3,34616	1,29610	3,26813
1,06543	3,94946	1,42707	2,67693	1,38320	4,41005
1,16904	4,20629	1,22320	0,96202	1,39364	7,21720
1,06600	3,19754	1,29284	1,44862	1,28109	4,89712
1,15483	3,06373	1,29284	1,26754	1,21791	2,65751
0,91153	1,31231	1,24821	2,96881	1,30019	2,93861
1,01081	1,40369	1,56026	5,85012	1,04563	2,43799
1,06543	3,94946	1,40424	2,49380	1,14329	1,31912
1,16904	4,20629	1,24821	2,11879	1,34141	0,62357
1,06600	3,19754	1,56026	0,97502	1,24450	2,13713
1,15483	3,06373	1,40424	2,40005	1,29512	3,12645
0,91153	1,31231	1,24821	2,23130	1,22071	1,69295
1,18465	4,77401	1,51356	4,45746	1,36080	5,83183
0,91127	1,09576	1,32437	2,02814	1,38855	8,27925
0,91503	1,46471	1,32437	2,29559	1,35472	1,17006
1,04277	2,29615	1,32437	2,11729	1,26200	2,13166
0,85318	1,31209	1,32437	2,02814	1,37734	2,71345
0,89674	1,13938	1,36459	4,12959	1,20252	4,42454
1,11823	1,51494	1,46096	4,07273	1,32158	2,28114
0,96331	1,29281	1,25225	1,80449	1,33713	3,56407
0,99398	1,08571	1,25225	2,96199	1,33713	4,42558
1,11823	1,60963	1,35391	0,80300	1,32370	1,41353
0,86973	0,70066	1,21640	1,93441	1,35618	5,46703
0,99398	1,21195	1,21640	1,10538	1,35618	4,98682
1,12325	2,27732	1,32868	2,98613	1,22071	1,65804
0,98284	1,12044	1,32868	0,71476	1,09904	0,36916
1,12325	2,54149	1,47631	3,11320	1,35050	3,79967
0,84244	1,06579	1,47631	5,52222	1,32278	2,13187
1,12325	2,18623	1,47631	3,15555	1,29151	2,49445
0,98284	1,01113	1,32868	2,04899	1,07681	0,74191
1,12325	1,54403	1,40773	1,70017	1,39510	2,87975
1,12325	1,89473	1,41949	3,16120	1,04391	1,31470
1,00028	1,19554	1,41949	4,97871	1,20894	5,31243
1,00028	1,59405	1,54854	6,66540	1,00652	1,78601
0,85738	0,59537	1,51432	3,24066	1,29780	2,73690
1,00028	1,55564	1,38813	3,81935	1,21288	2,28235
1,11528	1,49800	1,38813	2,51317	1,00692	0,44174
1,11528	1,40437	1,38813	2,42058	1,01651	1,31583
1,03024	0,46038	1,51432	4,73533	1,10196	0,61540
1,15902	0,49903	1,26194	3,03233	1,11267	1,09364
1,15902	0,88561	1,41737	2,64253	1,14188	1,13423
1,03024	1,13864	1,41737	3,90757	1,03135	1,42627
0,85089	0,53197	1,27563	3,12043	1,03135	1,54513
0,85089	0,28372	1,41737	0,72623	1,01202	1,35746
0,87145	0,58101	1,46007	3,82902	1,04817	1,62198
0,99595	1,04773	1,46007	3,82902	1,04856	1,51449
0,87145	0,60324	1,51809	3,17454	1,02118	1,25674
0,87145	0,58419	1,51809	1,18453	1,00170	1,12414
0,96286	1,32984	1,51809	4,20114	1,02403	1,04063
1,17683	2,85915	1,51809	4,46173	1,03854	2,04593
1,06984	1,61192	1,51809	2,77180	1,03854	1,38239
0,85587	0,86641	1,24201	2,65960	1,11960	1,92134
1,17683	2,43400	1,24201	1,74712	1,22922	0,55365
1,06831	1,29851	1,38001	4,86512	1,02919	1,31733
1,06831	1,19322	1,25338	2,67621	1,08936	1,64865
0,91569	1,02945	1,25338	0,56051	1,01325	1,18969
0,91569	0,47378	1,37872	2,13838	1,14594	2,02798
0,80761	0,51312	1,37872	3,74216	1,05180	1,92588
1,04061	0,99385	1,37872	3,96572	1,13313	1,20637
1,16248	1,02918	1,44974	0,81224	1,15563	2,41765
0,96873	0,80180	1,59472	4,96366	1,19680	2,43288
1,13973	1,64067	1,59472	5,77590	1,05934	1,46709
1,13973	2,00290	1,30477	2,85787	1,00028	1,18114
1,06857	0,63206	1,44974	0,80722	1,04817	0,92796
1,06857	0,57629	1,59472	3,20883	1,03854	2,24868
0,94201	0,75927	1,44974	5,19430	1,00807	1,26794
1,13041	0,72626	1,44974	4,28179	1,00969	0,94814
1,19427	2,10695	1,59472	3,48961	1,00170	0,78819
0,92888	0,65362	1,44974	3,50966	1,05817	1,34792
1,01444	1,64399	1,30477	2,80773	1,22198	1,47080
1,12577	2,31559	1,54530	1,78517	1,06773	2,09781
0,98505	1,07296	1,54530	3,44890	1,11483	1,96986
1,13743	2,98563	1,54530	4,88189	1,18585	0,99918
1,02369	2,24467	1,54530	1,01402	1,19862	2,35758

1,13743	2,18656	1,54530	0,92294	1,00638	1,79561
1,12880	2,55161	1,54530	2,67775	1,28648	2,34737
0,84660	1,06779	1,54530	3,35174	1,08293	1,52554
0,98770	1,42835	1,30832	2,93645	1,19164	0,38283
0,98770	1,30354	1,53000	1,17221	1,13767	1,73773
0,84660	0,59168	1,57355	2,98119	1,20109	2,53372
1,17251	2,77158	1,41620	4,50063	1,25608	2,39763
1,02595	1,53343	1,57355	1,01296	1,08649	2,21175
1,17251	1,80282	1,41620	3,23122	1,20541	3,24226
0,87938	0,34191	1,25884	2,53882	1,19929	0,40944
1,16860	1,99989	1,46564	4,20658	1,16041	1,76015
1,07122	1,92087	1,31907	2,46075	1,07115	1,22883
0,97384	1,55615	1,46564	5,18570	1,15563	0,39109
0,87645	0,91181	1,31907	4,09779	1,35360	2,24441
1,16860	1,71419	1,46564	3,26373	1,04391	0,96548
1,05035	2,23090	1,57836	4,66537	1,05180	1,24528
1,05035	2,07646	1,41673	1,66798	1,14240	2,37770
0,84028	0,84851	1,42939	4,98771	1,04662	1,48798
0,89632	1,02398	1,30266	1,24615	1,13313	1,00998
1,09550	0,94597	1,24666	2,53753	1,05778	1,36933
1,13723	3,93830	1,59236	4,17545	1,19000	2,58270
0,94769	2,11761	1,33142	5,38045	1,32377	0,32134
0,85292	1,02939	1,24873	2,49203	1,37079	3,29902
1,04246	2,36690	1,23200	2,69235	1,33189	1,38366
0,85292	1,19886	1,56285	5,20911	1,33189	0,41622
1,07773	2,92491	1,54966	10,71516	1,28461	1,69390
0,88178	1,41138	1,65238	17,51553	1,07668	1,06580
1,07773	2,53492	1,54758	9,11916	1,11089	2,36411
0,88178	1,11580	1,54758	8,88491	1,00028	1,12352
0,91405	0,21614	1,48033	7,31492	1,30273	1,82976
1,18827	3,27979	1,74458	11,69195	1,07313	1,72772
1,18827	3,03098	1,54917	7,32151	1,15209	1,63161
0,96253	1,40899	1,42007	7,93045	1,00807	0,98290
1,17643	1,10505	1,42007	2,83230	1,15209	2,10340
1,06736	2,50318	1,54917	2,83230	1,08894	0,84246
0,94876	1,27629	1,67827	10,46182	1,09083	1,84316
1,06736	2,32752	1,55170	7,84909	1,14240	2,52058
0,94876	1,26257	1,55170	6,00224	1,19475	2,70241
1,05020	2,04485	1,43234	6,25688	1,08377	1,22733
0,90017	0,38341	1,43234	10,98592	1,12946	2,25706
0,90017	1,35027	1,59848	1,13156	1,09627	1,82030
1,05020	2,02262	1,48431	1,95941	1,22506	0,56024
0,90017	0,77793	1,48431	5,87823	1,08894	1,44416
1,17161	1,08014	1,48431	2,98320	1,31295	3,15717
1,17161	1,80537	1,77491	8,39110	1,02304	2,19827
1,14378	1,01452	1,41993	4,37957	1,02403	1,25185
1,14378	2,53061	1,41993	5,15243	1,17033	1,09214
1,05271	1,56147	1,59742	2,72343	1,09463	1,83365
0,90232	0,69399	1,77491	8,17028	1,06773	1,65746
1,05271	1,90286	1,59742	7,56303	1,21040	1,57570
0,90232	0,70518	1,41993	7,02019	1,14594	2,62968
0,83127	0,71922	1,77491	1,51813	1,08649	1,56173
1,06877	2,17970	1,59742	6,48654	1,19680	1,44955
0,95002	1,25381	1,59742	8,77753	1,22387	2,25174
1,18752	2,88790	1,52274	9,07794	1,04563	1,77770
1,01440	1,35862	1,71308	10,51906	1,35360	1,11607
1,11584	0,98418	1,71308	14,07081	1,04633	0,69812
0,91296	1,62313	1,44367	7,13120	1,22071	1,15190
1,14882	3,53853	1,76449	16,09613	1,27920	2,11940
0,89978	1,56909	1,60408	10,02443	1,25608	1,18092
0,80980	0,44591	1,79008	6,80515	1,04720	2,01147
1,16972	3,46422	1,79008	12,26989	1,04924	0,67757
0,84768	0,91429	1,79008	8,64821	1,04924	0,63357
1,03605	2,07193	1,79008	8,42051	1,20109	0,65153
0,94187	1,75433	1,77893	3,14957	1,10658	0,37013
1,00112	2,37020	1,60104	9,26343	1,21724	1,45377
1,07813	4,41425	1,42315	2,42702	1,23709	1,73210
1,07663	2,61931	1,60104	10,33799	1,09522	1,94819
0,82652	0,14958	1,73642	1,77244	1,14176	2,71559
1,01291	2,45963	1,46928	10,37581	1,28850	0,96794
1,08297	1,68015	1,46928	3,21548	1,22631	2,77239
0,82761	1,06334	1,50136	0,89098	1,19175	2,68202
0,99313	0,53167	1,65149	4,56627	1,13313	1,55705
0,99313	1,13609	1,50136	5,17882	1,23156	2,78502
0,97693	1,72627	1,50136	11,61057	1,16104	1,40841
1,05559	2,24640	1,65149	3,78666	1,00980	1,33873
0,89319	1,39541	1,52727	6,31917	1,11305	1,32623
0,81199	1,09501	1,52727	8,26533	1,06736	1,20768
0,94460	0,32425	1,68000	7,01674	1,28316	2,52744
1,17443	3,96305	1,68000	7,92534	1,06948	0,71754
1,17619	3,72702	1,68000	6,44227	1,33856	0,61564
0,98844	1,46493	1,58521	7,73168	1,07140	2,01541
1,09724	1,92709	1,58521	12,81884	1,07161	0,74058

0,88371	1,09042	1,51068	6,40185	1,21333	3,15461
0,95258	1,13500	1,76246	17,80372	1,14240	1,86772
0,85823	1,39973	1,51068	4,20553	1,26933	3,06238
1,18775	2,79655	1,59006	3,86607	1,32101	3,00950
1,07977	1,70693	1,59006	3,14645	1,15394	0,98764
1,16473	2,87150	1,59006	2,43286	1,08214	1,56390
1,05884	2,49254	1,59006	2,38468	1,19123	0,36989
0,96532	1,54921	1,59006	8,17777	1,08293	1,69272
1,17984	0,37157	1,46775	10,86355	1,19514	2,88709
1,17984	1,69540	1,45418	8,61375	1,03135	0,99542
1,11978	2,16778	1,45418	10,53918	1,26053	1,53522
1,16021	2,03049	1,45418	9,07898	1,36118	0,67228
0,99457	1,47022	1,45418	5,52754	1,08894	0,87978
1,11889	1,53345	1,44869	0,81316	1,00935	1,08104
1,03370	1,24534	1,54103	3,73251	1,31295	2,57478
1,03370	1,27900	1,40093	4,41567	1,05041	2,68182
1,01016	1,13076	1,49957	5,81895	1,15267	2,02862
1,01016	1,08365	1,49957	4,08134	1,25267	1,10062
1,05689	1,24109	1,68045	4,49770	1,31662	0,66456
1,00563	1,07937	1,68045	1,31964	1,17033	1,80822
0,90507	1,05427	1,68045	11,42383	1,18168	1,12407
0,80451	0,81999	1,51240	1,15566	1,27120	2,87984
1,10619	1,54626	1,65582	11,17636	1,09846	2,09008
1,10619	2,65073	1,52845	3,28116	1,09846	1,80610
0,97263	1,47770	1,78319	8,92885	1,10196	2,91820
0,97263	1,47316	1,52845	4,18901	1,21361	0,80879
0,97263	1,29602	1,70238	7,64841	1,19645	3,59172
0,97263	0,47238	1,56051	1,55035	1,16291	2,08058
0,91127	1,51912	1,41301	1,65488	1,28109	1,64277
1,02116	2,29357	1,71605	4,65467	1,10831	1,73974
0,81693	0,84104	1,71605	4,75165	1,11010	1,54238
1,12327	0,31364	1,47090	4,46073	1,22198	0,41282
0,99892	1,66939	1,71605	5,67288	1,11240	0,77598
0,88793	1,29592	1,47090	2,01218	1,27383	2,86977
0,86731	0,99402	1,72048	9,05035	1,28683	3,44096
0,86731	1,29591	1,51801	2,94069	1,16041	2,18848
0,83678	0,78335	1,79401	6,05437	1,17575	2,24654
0,99065	1,18732	1,65601	3,76236	1,16355	0,98635
1,19475	1,92508	1,65601	2,52986	1,18551	1,89544
1,19475	3,05599	1,65601	5,66084	1,24617	1,99979
1,05482	1,64243	1,51801	3,41639	1,37079	3,99959
0,93761	1,24507	1,65601	4,85215	1,12200	2,11500
0,82041	0,34438	1,42291	3,21855	1,12200	2,10106
1,14740	2,61741	1,64713	0,67274	1,12356	2,81732
1,07222	1,66942	1,64713	1,99814	1,12356	2,62203
0,83395	0,85697	1,52043	4,66233	1,32222	3,92540
1,19135	3,07173	1,64713	5,38192	1,19100	1,98292
1,07222	2,27875	1,47015	3,23182	1,05867	0,99527
0,95308	0,94600	1,47015	8,09383	1,00170	1,12414
0,85171	0,38532	1,59909	8,61798	1,25213	1,79604
1,09506	2,17853	1,43428	6,01581	1,37734	2,69729
0,97338	0,99590	1,53673	1,28986	1,05221	1,30774
1,09506	2,18742	1,57211	4,66194	1,18865	1,72440
0,97338	1,07889	1,61484	1,86374	1,07140	1,94323
0,85171	0,20451	1,76164	5,62246	1,13233	1,78601
0,97338	0,49202	1,46803	4,24287	1,13279	0,86373
1,07238	1,94543	1,62292	5,19923	1,13279	0,75300
1,13826	0,32636	1,49808	6,37418	1,27477	3,37128
1,03478	2,24620	1,49808	1,86327	1,27477	1,66927
0,93130	0,81133	1,49808	3,59208	1,22071	2,30380
0,93130	1,15957	1,62292	3,93784	1,07527	1,85212
1,00015	1,49043	1,41726	1,04637	1,29952	3,58606
0,88903	0,74070	1,41726	4,36711	1,08293	1,77213
1,19721	2,29115	1,41726	7,23515	1,19123	1,42941
1,08837	1,74806	1,41726	1,61835	1,36459	2,37452
1,19721	0,76796	1,50716	1,13596	1,08331	1,89112
1,09349	2,49572	1,50716	8,65493	1,30019	2,35230
0,87479	0,67126	1,45131	1,41288	1,07876	1,66617
1,12917	1,72883	1,40026	2,20291	1,20727	2,93116
1,12917	1,26738	1,69065	3,84252	1,07313	1,42983
1,12917	1,81332	1,44913	2,22553	1,28316	3,63856
0,87824	0,75068	1,44913	3,69183	1,22959	2,66208
1,12917	2,78173	1,44913	4,33515	1,30560	3,35686
1,00370	1,09189	1,63094	8,15628	1,24625	3,81907
1,12917	1,55985	1,42707	3,84809	1,14240	1,61278
1,00370	0,68893	1,63094	4,89377	1,14318	1,92055
1,00370	0,68893	1,63094	3,01155	1,09026	1,71666
1,00370	0,99440	1,42707	2,53751	1,14820	1,76305
1,00370	0,72143	1,73649	3,31080	1,33144	3,71166
0,96888	1,02599	1,50831	1,61323	1,15267	1,95806
1,08999	1,78305	1,40424	4,38759	1,35618	0,68133
0,96888	1,40306	1,71629	1,06252	1,35618	2,58576
0,84777	0,38584	1,56026	7,75016	1,29818	0,68147

1,08999	1,78890	1,40424	4,95010	1,15442	2,10359
1,08706	1,60841	1,71629	1,19377	1,27120	1,19613
1,08706	1,42354	1,40424	3,32507	1,30117	3,46078
1,08706	1,58992	1,71629	5,40636	1,08894	1,51056
0,93176	0,80112	1,40424	2,32505	1,28648	3,36340
1,10339	1,81930	1,51356	3,64397	1,21956	1,69533
1,00495	1,31955	1,51356	5,29323	1,27589	2,51899
0,89329	1,13399	1,70276	1,45982	1,07161	0,80620
1,05857	1,70286	1,51356	2,38474	1,23146	3,08560
0,82333	0,69882	1,70276	9,67268	1,27991	2,61284
1,17619	3,46998	1,55717	5,65150	1,16463	1,46602
0,82333	0,62652	1,44594	7,78666	1,22198	3,18072
1,00370	1,88066	1,57905	0,91022	1,22198	2,17913
0,94456	1,30903	1,66783	10,15765	1,22198	2,11145
0,87510	0,87128	1,66967	2,82735	1,25628	1,80722
1,02075	2,30756	1,56532	0,89383	1,24666	3,36253
0,85823	0,59927	1,62394	1,01126	1,09083	1,55050
1,18379	1,74816	1,62394	3,55794	1,17136	1,38579
0,91900	1,03448	1,47631	3,21909	1,11185	2,38889
1,05143	0,89877	1,40773	1,84893	1,21563	4,25833
1,13723	2,26886	1,54854	2,67323	1,34352	2,36934
0,85292	1,04900	1,41949	2,97026	1,22054	5,21738
0,94941	1,09414	1,41949	5,23331	1,30773	3,57420
1,02767	0,30360	1,67758	6,30119	1,09956	1,43495
1,09146	2,07791	1,54854	6,71844	1,12200	2,74253
1,06263	0,92102	1,54854	7,00132	1,17924	3,63293
0,92174	0,47129	1,64052	3,90863	1,22257	3,64031
1,02353	1,56796	1,41737	2,88617	1,18372	2,75107
1,02353	1,30951	1,70084	4,49792	1,06535	1,62117
1,15147	1,87811	1,70084	3,46715	1,22959	3,09350
1,02353	1,68857	1,70084	8,19934	1,35535	3,60371
0,98131	1,11520	1,41737	1,44308	1,18595	2,76668
0,84112	0,27653	1,68676	1,19243	1,06736	1,59743
1,12150	2,61120	1,51809	4,26431	1,25608	0,66651
0,98131	0,69813	1,65601	2,27039	1,18775	1,11054
1,12150	1,00640	1,51801	3,02719	1,14188	2,87810
1,13929	2,96864	1,49381	4,49387	1,19045	2,93150
1,13929	3,56237	1,50405	1,90510	1,23200	2,78979
1,02536	1,70332	1,62939	7,09229	1,29952	1,24760
0,96501	1,64140	1,59472	4,11132	1,29952	2,42833
0,81021	0,55894	1,44974	3,63501	1,32417	2,20063
0,81021	0,36579	1,44974	4,94862	1,19175	2,24648
0,86709	0,57827	1,44974	2,88795	1,25639	3,49831
0,86709	0,43161	1,54530	0,95330	1,31422	3,46009
0,86709	0,82970	1,47185	1,06518	1,30379	1,43510
1,08387	0,35618	1,47185	2,80690	1,25815	1,87450
1,10831	2,45016	1,61220	3,68853	1,30560	1,20796
0,92359	0,99821	1,61220	3,25337	1,25504	0,43502
1,01595	0,22816	1,46564	5,92652	1,31849	4,02092
0,89542	0,67573	1,46564	2,56436	1,25475	3,16036
1,08659	1,70174	1,46564	0,83406	1,15019	2,50383
0,94497	1,17569	1,44683	1,87588	1,20269	1,25184
0,85602	1,17799	1,41673	1,77629	1,26053	2,03045
0,95113	0,23928	1,63359	5,71625	1,26053	2,27312
1,06585	1,15561	1,74395	6,10675	1,06971	1,22736
0,85268	0,54991	1,48504	0,91612	1,26933	2,86720
1,17243	0,71727	1,42939	2,94219	1,07313	1,62842
1,06585	2,10400	1,44237	6,10413	1,20727	2,59753
0,97548	1,46664	1,58290	5,03569	1,35455	3,29374
0,97548	1,61330	1,54966	8,88866	1,26793	3,71452
0,98294	1,24760	1,40879	4,80319	1,26793	2,96355
0,87373	0,54020	1,79008	10,51705	1,33144	2,43650
1,03823	1,61877	1,51468	6,04902	1,28316	2,55605
1,13262	2,19156	1,71204	6,35541	1,28316	1,95996
0,84946	0,96849	1,54758	7,36226	1,14820	1,96806
0,92129	0,90370	1,71954	2,71065	1,36459	0,78577
1,02365	1,90624	1,47619	8,01734	1,32394	2,14350
1,02365	1,52499	1,47619	4,19956	1,28607	2,93843
0,81892	0,75896	1,47619	5,26138	1,28607	2,55432
1,13676	2,95105	1,54917	5,70355	1,28607	2,61674
0,82673	0,60292	1,42007	6,11778	1,30019	2,58541
0,89728	0,82652	1,42007	3,00932	1,21925	3,11743
1,12160	0,38772	1,54917	5,32473	1,22054	3,87405
0,82939	0,40507	1,67827	11,15220	1,27920	2,75341
1,18484	1,82282	1,43234	5,38383	1,33307	1,53396
1,06635	1,05099	1,55170	5,37264	1,31605	4,08965
0,82939	0,60761	1,55170	6,58428	1,29610	3,09613
1,17303	0,67846	1,79042	13,67784	1,29610	2,16237
0,95975	0,99774	1,71237	7,50332	1,39898	2,90386
1,04246	1,13443	1,71237	11,44165	1,22506	2,42769
0,94769	0,23529	1,70000	3,75587	1,22547	3,78766
1,08227	2,02299	1,77491	7,94946	1,33780	2,79291
0,84177	0,70390	1,59742	4,60038	1,23049	1,99389

1,19226	1,98824	1,41993	2,95345	1,35360	0,56110
1,19604	3,16290	1,77491	2,77863	1,05629	1,38266
1,06314	1,05430	1,59742	5,79648	1,16836	1,87198
0,93025	0,50977	1,41993	5,06042	1,36080	3,57636
1,19604	2,23990	1,77491	2,94425	1,15591	2,63767
0,83331	0,41085	1,77491	10,08404	1,15591	2,02271
1,07140	1,81553	1,59742	5,74128	1,35535	2,20490
0,95236	0,67458	1,71308	6,30917	1,18372	1,96505
1,19045	2,44292	1,52274	6,12761	1,31662	3,35371
0,95236	1,01048	1,76449	11,74271	1,31662	0,69032
0,90503	0,90532	1,60408	8,96493	1,24450	2,55217
1,01816	1,39371	1,65238	6,59893	1,08894	1,30086
0,90503	0,91484	1,51468	5,56785	1,30455	3,65322
1,13129	0,40501	1,79008	11,96057	1,09083	0,90913
1,13129	2,24899	1,51468	6,44427	1,16479	1,27364
1,00674	1,54771	1,77893	2,90872	1,16479	1,97869
1,05813	2,21068	1,77893	11,92203	1,30751	0,90089
0,95232	0,93574	1,42315	5,61364	1,37324	3,31675
1,16394	2,57328	1,77893	1,49141	1,30560	2,14890
0,95232	1,33733	1,77893	5,70627	1,20492	4,00790
0,80800	0,35263	1,60104	1,39878	1,31723	2,63255
1,11100	1,65803	1,43660	2,84073	1,12692	2,13199
0,93695	0,22332	1,56720	6,16896	1,39564	0,67993
0,82710	0,83525	1,46928	6,96426	1,19100	2,17359
1,01090	0,23372	1,50136	3,45254	1,19100	2,37950
1,08586	2,14159	1,50136	4,94493	1,32417	2,13950
0,88843	1,10799	1,50136	7,29489	1,25815	2,21204
0,98715	0,26117	1,50136	1,69286	1,31849	2,30941
0,97263	1,76234	1,65149	5,24564	1,31849	0,47322
0,97263	1,09011	1,52727	4,22059	1,31849	3,08582
1,06989	2,48908	1,52727	8,18912	1,31849	2,28107
0,97263	1,34446	1,72932	8,51963	1,31849	3,35502
1,11404	2,31268	1,44110	5,75198	1,26277	5,08595
1,11404	0,63928	1,72932	9,47993	1,35050	2,46979
0,80489	0,61336	1,72932	14,06477	1,01287	1,28239
0,87972	0,75609	1,58521	9,73109	1,07085	1,64172
0,87972	1,08649	1,76246	15,19374	1,07085	1,31022
1,07522	0,58090	1,51068	6,17533	1,20470	2,46257
1,14901	0,83205	1,71237	9,11117	1,20727	2,06532
0,83720	0,61102	1,46775	5,69674	1,34141	4,36894
0,83720	0,85241	1,59006	6,49163	1,20727	2,06532
1,12501	2,74126	1,59006	8,38252	1,22090	3,56827
1,01251	1,56041	1,45418	6,92785	1,20252	2,19074
1,01251	1,91185	1,67790	12,08919	1,36406	5,34068
0,95272	1,78425	1,45418	5,83846	1,39549	3,76782
0,83363	0,45579	1,45418	5,77167	1,27991	4,00999
1,07181	1,41739	1,45418	7,65795	1,28042	2,59820
1,19090	3,17662	1,45418	6,30140	1,28109	0,89936
1,07181	1,51744	1,68045	6,94175	1,28116	1,79569
0,83363	0,42800	1,51240	2,29570	1,28154	3,75482
1,11850	1,57849	1,51240	5,46595	1,21741	3,22146
1,11850	2,11365	1,51240	2,92819	1,28562	0,45709
0,97869	0,63859	1,52845	7,80339	1,17924	2,67604
0,83888	0,60261	1,40108	4,72624	1,21925	2,11102
0,90297	0,72913	1,65582	10,20731	1,35765	0,59295
0,90297	0,77400	1,40108	5,75309	1,23420	3,32358
0,97587	1,51583	1,56051	1,59733	1,23055	2,55409
1,12057	1,08003	1,41865	2,63090	1,29610	1,91665
0,97439	0,91618	1,64851	4,34138	1,37771	5,72274
1,06135	0,57379	1,71605	4,70316	1,35893	2,49747
1,16427	1,77402	1,71605	4,60619	1,35893	1,00519
1,03491	0,97251	1,47090	2,01218	1,11185	3,18311
0,97854	1,48012	1,47090	3,44252	1,29760	4,45598
1,02562	1,58105	1,47090	2,03642	1,29818	2,42960
1,02562	0,92574	1,59472	2,02341	1,35011	5,01345
1,16607	1,54606	1,59472	3,54097	1,16836	2,62077
1,04125	1,26730	1,41150	3,31877	1,16836	2,46957
0,91949	0,41455	1,54843	5,32127	1,36080	4,85986
1,07274	1,59899	1,54843	3,88830	1,13826	1,61309
0,86095	0,54604	1,51801	4,02183	1,25475	4,18371
1,09384	0,74028	1,79401	10,59515	1,25475	4,87598
1,09384	0,74776	1,65601	7,18308	1,07668	1,47297
0,92559	0,40473	1,65601	3,69749	1,39510	3,97929
1,14058	1,65953	1,79401	5,69111	1,37324	1,15254
0,99801	0,61040	1,65601	4,02183	1,37324	3,63050
1,14058	1,57369	1,79401	7,00577	1,35628	4,80711
1,14058	1,28756	1,51801	2,29634	1,39898	3,14145
0,85544	0,63901	1,52043	1,26515	1,37513	1,91160
1,01423	0,38349	1,64713	4,57865	1,31849	3,67805
0,83832	0,57003	1,52043	4,97025	1,25639	2,61068
1,05689	1,33103	1,47015	6,47316	1,15591	1,57815
1,03512	0,53230	1,59909	6,94583	1,15591	1,73375
1,03512	0,73508	1,70312	8,41740	1,36406	6,11762

1,14631	0,91009	1,62292	6,12767	1,32333	3,30995
0,85973	0,59059	1,49808	3,45762	1,24666	3,69878
0,85973	0,41148	1,77157	1,34456	1,38320	3,83296
0,84946	0,37356	1,53536	2,68370	1,22599	1,10898
0,84946	0,61638	1,53536	6,48426	1,39626	3,27440
1,13262	1,84913	1,67462	6,92394	1,39188	4,09561
0,99104	0,70977	1,64769	2,62396	1,25664	3,09311
1,18261	1,63292	1,45131	8,03911	1,24772	3,13109
0,94608	1,00153	1,40406	2,01175	1,39549	2,77929
1,13322	2,42880	1,40026	1,86045	1,39626	3,68079
1,03020	1,91066	1,44913	3,32671	1,38539	4,58141
0,82416	0,66927	1,49303	2,94742	1,27577	3,08534
1,18451	1,92069	1,61745	6,17058	1,39364	6,30086
1,18327	1,88105	1,63094	6,30194	1,39052	4,33870
0,98117	1,11714	1,42707	3,34616	1,34141	3,31245
1,10382	1,94893	1,63094	4,85194	1,34141	4,68271
0,98117	0,76500	1,42707	2,67693	1,34580	2,72610
1,19082	1,45298	1,73649	3,43046	1,34580	3,60346
1,04372	1,90011	1,71629	4,02508	1,34640	4,88078
0,91325	0,75639	1,71629	6,90014	1,18571	3,11604
1,07912	2,01932	1,56026	5,85012	1,35050	2,77851
0,94423	0,61387	1,40424	2,49380	1,35413	4,25260
1,12000	1,34797	1,56026	0,97502	1,35413	4,29429
1,20378	2,67439	1,40424	2,40005	1,29997	4,01235
1,06543	4,33038	1,51356	4,45746	1,35608	4,61009
1,16904	3,90873	1,70276	2,74134	1,35608	2,99459
1,06600	3,77891	1,70276	7,28794	1,22188	0,60118
1,24367	6,40085	1,77962	2,76235	1,25413	1,09696
1,15483	4,72249	1,66840	4,58505	1,22506	1,76370
1,20378	2,67439	1,66840	6,79946	1,36118	3,41121
1,06543	4,33038	1,66783	2,83909	1,30209	4,36405
1,16904	3,90873	1,66783	6,62455	1,29818	3,37676
1,06600	3,77891	1,66783	8,20183	1,30455	4,17472
1,24367	6,40085	1,66783	2,13362	1,37324	5,57701
1,15483	4,72249	1,46096	4,07273	1,37734	2,15784
1,06600	3,50668	1,47631	3,11320	1,37734	4,23168
1,06600	3,68202	1,47631	5,52222	1,33219	7,25196
1,27577	5,52859	1,77157	4,95040	1,31475	4,56229
1,35205	6,78379	1,47631	3,15555	1,30763	2,50071
1,25548	4,81254	1,64236	3,95289	1,32417	4,16057
1,22004	0,99607	1,40773	1,70017	1,04720	1,72634
1,04277	0,25933	1,67758	4,97518	1,24450	2,97340
1,04277	0,99248	1,67758	4,15836	1,20061	0,98879
1,04277	2,76996	1,67758	6,61236	1,29350	3,64981
1,29530	6,71423	1,41949	3,16120	1,33118	3,21443
1,34520	4,23261	1,41949	4,97871	1,39364	4,55941
1,23310	4,73097	1,67758	5,60105	1,39626	2,39770
1,11823	2,98254	1,67758	8,86126	1,39626	6,17958
1,36672	3,04882	1,54854	6,66540	1,38430	3,29322
1,24247	4,00513	1,51432	3,24066	1,15577	0,34929
1,11823	1,79268	1,64052	4,35174	1,32104	3,11185
1,11823	1,64119	1,51432	4,73533	1,32104	3,08222
1,08372	1,55137	1,70084	5,34128	1,35268	4,60209
1,08372	2,73501	1,70084	6,22213	1,33856	3,19661
1,08372	0,39359	1,41737	2,64253	1,35268	4,04821
1,08372	0,83889	1,41737	3,90757	1,28697	2,86330
1,20414	2,08286	1,41737	0,72623	1,36363	2,42708
1,08372	2,91887	1,46007	3,82902	1,37382	3,46677
1,36672	5,83253	1,46007	3,82902	1,23539	2,94112
1,11823	3,57905	1,68676	1,23191	1,22090	2,82582
1,36672	3,88835	1,51809	3,17454	1,33856	2,74277
1,36672	5,94615	1,51809	1,18453	1,29818	0,66666
1,24247	3,55065	1,68676	4,67495	1,30751	1,87915
1,24247	1,05415	1,51809	4,20114	1,24104	1,54050
1,36672	3,25713	1,51809	4,46173	1,30560	1,57671
1,26366	4,36791	1,68676	3,71943	1,20541	0,68673
1,26366	3,73026	1,68676	4,67495	1,33307	2,09792
1,26366	0,71508	1,51809	2,77180	1,30209	2,82749
1,26366	4,01720	1,72362	6,68589	1,25639	2,34961
1,12325	1,76720	1,62939	4,37720	1,20727	2,19241
1,26366	3,07439	1,44974	0,81224	1,29818	3,06717
1,26366	2,89676	1,73969	4,43721	1,23539	1,49848
1,26366	0,64221	1,59472	4,96366	1,28644	3,73024
1,26366	0,61488	1,59472	5,77590	1,25213	3,95388
1,00028	0,90266	1,44974	0,80722	1,20252	2,45900
1,28607	4,36924	1,59472	3,20883	1,50909	1,79708
1,14318	2,49671	1,44974	5,19430	1,33713	0,62155
1,28607	0,72981	1,44974	4,28179	1,47241	3,76490
1,28607	2,70797	1,59472	3,48961	1,33856	1,24707
1,28607	2,43909	1,73969	6,81877	1,34141	2,99868
1,39409	1,39100	1,44974	3,50966	1,20727	3,30848
1,39409	3,45520	1,54530	1,78517	1,42573	2,34623
1,25469	3,66474	1,54530	3,44890	1,48794	3,93418

1,11528	1,83683	1,54530	4,88189	1,57605	1,87049
1,39409	4,77932	1,54530	1,01402	1,32104	2,44503
1,11528	2,08649	1,69983	6,54562	1,22506	3,06262
1,39409	2,71066	1,54530	0,92294	1,25021	0,90932
1,28780	1,77122	1,54530	2,67775	1,24666	0,75968
1,28780	2,77631	1,54530	3,35174	1,35893	4,18831
1,15902	1,89773	1,63539	1,10117	1,23539	3,88117
1,03024	1,19135	1,79893	4,69256	1,25664	2,33418
1,36943	1,14932	1,79893	6,43427	1,23420	4,56237
1,24493	2,80029	1,63539	4,42626	1,30209	4,14844
1,12044	3,00031	1,70785	1,27050	1,30455	3,24975
1,28381	1,89401	1,70785	1,25411	1,23703	3,68624
1,28381	4,25547	1,53000	1,17221	1,25475	3,31838
1,17683	3,62682	1,70000	4,75352	1,20269	1,71920
1,28381	5,16822	1,57355	2,98119	1,33713	0,64515
1,06984	2,36952	1,41620	4,50063	1,34141	1,22330
1,27563	0,67469	1,57355	1,01296	1,20727	1,62048
1,27563	4,23086	1,73091	4,96864	1,27577	1,95439
1,06831	1,75474	1,41620	3,23122	1,53155	1,45048
1,22093	0,76624	1,75876	7,41851	1,42735	1,55992
1,37354	2,29871	1,61220	6,21663	1,21925	2,20920
1,22093	1,82493	1,46564	4,20658	1,22054	3,02248
1,06831	1,07624	1,61220	3,25337	1,46994	1,07537
1,37354	3,13513	1,46564	5,18570	1,22506	2,24094
1,06831	1,12303	1,61220	5,58460	1,22547	2,95552
1,28316	3,91991	1,46564	3,26373	1,23049	1,32926
1,14058	1,64522	1,57836	4,66537	1,40839	1,97523
1,14058	2,78972	1,41673	1,66798	1,29818	3,70436
1,01146	0,88541	1,42939	4,98771	1,32104	1,85229
1,25580	1,17678	1,63359	4,58141	1,32104	0,94837
1,12723	1,37640	1,59236	4,17545	1,30209	0,94977
1,24873	1,29052	1,76319	7,51453	1,24450	0,78052
1,16248	1,06508	1,65238	17,51553	1,40007	3,14685
1,35748	2,66411	1,99738	17,28863	1,40250	4,52073
1,35748	2,30409	1,89149	3,21262	1,33118	2,66100
1,16355	0,94804	1,89149	22,42142	1,33118	1,71335
1,30255	1,70459	1,97378	15,64030	1,29760	4,88180
1,24666	1,76605	1,74458	11,69195	1,37734	3,10108
1,24666	0,91091	1,67827	10,46182	1,32333	1,84183
1,06857	0,78078	1,94102	2,73338	1,32333	4,48445
1,00660	0,96669	1,77491	8,39110	1,25815	1,99247
1,13041	0,91332	1,95240	9,38478	1,26277	4,74181
1,31881	2,22279	1,77491	8,17028	1,51931	1,11615
1,06157	1,25725	1,77491	1,51813	1,47241	3,45313
1,06157	1,34953	1,95240	10,36927	1,47241	3,17688
1,32697	1,32261	1,90342	3,81273	1,33856	1,98900
1,06157	2,26843	1,90342	16,85093	1,34141	1,76346
1,32697	0,60363	1,71308	10,51906	1,20727	4,00354
1,14124	2,86524	1,71308	14,07081	1,34141	4,11475
1,26805	0,54017	1,92490	20,20506	1,33189	3,45578
1,14124	0,49320	1,76449	16,09613	1,35284	4,39266
1,01444	1,38229	1,60408	10,02443	1,27991	4,75911
1,14124	0,53010	1,79008	6,80515	1,28042	1,93355
1,39485	3,01957	1,79008	12,26989	1,28109	2,13144
1,15024	2,36720	1,79008	8,64821	1,28116	1,99746
1,00646	1,34989	1,79008	8,42051	1,28154	4,43006
1,29402	4,51920	1,77893	3,14957	1,35268	0,66791
1,15024	2,39655	1,95682	9,67102	1,28562	1,44221
1,29402	2,77804	1,60104	9,26343	1,39364	2,71050
1,29402	2,52371	1,60104	10,33799	1,35472	1,86555
1,15024	2,15200	1,73642	1,77244	1,22188	0,56412
1,29895	2,01871	1,65149	4,56627	1,34640	4,52518
1,11338	0,91473	1,65149	3,78666	1,35360	3,20105
1,09219	1,38753	1,80163	8,67034	1,29610	1,79870
1,09219	1,16252	1,68000	7,01674	1,21563	5,95396
1,16060	1,76350	1,68000	7,92534	1,23539	1,46125
1,26649	3,14094	1,68000	6,44227	1,23539	0,48708
1,25118	1,68532	1,83272	4,66610	1,48247	5,67748
1,02369	2,26646	1,76246	17,80372	1,29760	4,06817
1,25118	2,07033	1,83469	10,34265	1,29818	3,01231
1,25118	3,80165	1,96131	12,05713	1,24625	4,47893
1,13743	2,94204	1,84849	5,30978	1,42800	4,89235
1,13743	1,17682	1,68045	4,49770	1,42800	3,36956
1,12880	2,99537	1,68045	1,31964	1,23709	2,24301
1,12880	0,56394	1,84849	5,37225	1,46347	3,53747
1,12880	1,52542	1,84849	11,38479	1,35932	3,89025
1,31907	2,09811	1,68045	11,42383	1,35932	6,21914
1,31907	2,79748	1,65582	11,17636	1,53811	3,71235
1,31907	1,53343	1,91056	12,79144	1,22071	1,74530
1,31907	2,83893	1,78319	8,92885	1,24840	0,51544
1,17251	1,69403	1,70238	7,64841	1,24840	0,47702
1,07122	1,25373	1,96120	8,14568	1,26586	3,74035
1,24174	1,60958	1,71605	4,65467	1,22411	1,75992

1,01597	1,60485	1,71605	4,75165	1,22204	3,75204
1,35462	6,21346	1,71605	5,67288	1,26053	4,18471
1,26042	1,86862	1,96120	2,90917	1,31849	5,56241
1,36545	4,83171	1,89253	15,78783	1,38202	1,62515
1,15538	2,82200	1,72048	9,05035	1,20091	2,22293
1,19509	3,33526	1,93201	7,97880	1,48617	5,00119
1,09550	2,52095	1,93201	11,10545	1,48617	6,37930
1,29468	5,33121	1,79401	6,05437	1,27880	5,76586
1,13723	1,61341	1,65601	3,76236	1,32333	2,66931
1,23200	4,68338	1,65601	2,52986	1,40250	4,26543
1,04246	2,57138	1,65601	5,66084	1,26793	2,09162
1,04246	2,11761	1,65601	4,85215	1,21724	4,57982
1,32677	4,96629	1,64713	0,67274	1,43032	2,91986
1,13723	3,15680	1,64713	1,99814	1,26933	0,52161
1,27368	5,97981	1,90054	26,10635	1,27589	4,77350
1,17643	0,70047	1,64713	5,38192	1,41372	3,29082
1,28337	1,59417	1,96513	7,32591	1,42597	3,21496
1,18595	3,97984	1,96513	7,79210	1,25837	5,33127
1,06736	1,72917	1,61484	1,86374	1,27920	1,82180
1,30455	3,44737	1,76164	5,62246	1,27991	4,13441
1,06736	2,36320	1,62292	5,19923	1,29303	4,66697
1,35025	4,66760	1,62292	3,93784	1,40335	3,56710
1,05020	2,52828	1,84209	6,25937	1,28644	5,29126
1,35025	3,38956	1,84209	13,72424	1,29120	5,42217
1,05020	1,01131	1,92230	7,08809	1,34141	0,61959
1,35025	0,80016	1,88527	3,21400	1,34141	5,36188
1,35025	2,33380	1,99720	1,61728	1,23156	2,77116
1,20023	2,03374	1,69065	3,84252	1,34580	2,77310
1,05020	1,68367	1,63094	8,15628	1,34580	3,79147
1,33898	1,00299	1,83480	7,64041	1,34640	5,52923
1,17161	0,83325	1,63094	4,89377	1,50909	2,30818
1,14378	0,94613	1,63094	3,01155	1,35050	2,63602
1,14378	1,86946	1,73649	3,31080	1,35413	4,48190
1,21180	1,03026	1,71629	1,06252	1,35413	3,68082
1,35349	2,88787	1,87232	11,62524	1,40830	3,91193
1,20310	1,89727	1,87232	11,34399	1,35608	1,62113
1,20310	4,54448	1,71629	1,19377	1,35608	0,76553
1,06877	2,90168	1,71629	5,40636	1,22056	0,58693
1,18752	2,61234	1,70276	1,45982	1,28607	3,07287
1,18752	2,97608	1,89196	10,99878	1,49341	2,71768
1,30628	3,28471	1,70276	9,67268	1,46315	5,58998
1,01440	0,28684	1,66783	10,15765	1,23709	2,61685
1,11584	0,96357	1,66967	2,82735	1,23709	3,68851
1,11584	0,31260	1,62394	1,01126	1,23709	0,46106
1,32557	7,68233	1,62394	3,55794	1,49729	2,11644
1,14882	2,94120	1,87698	7,65076	1,36118	1,23667
1,32557	5,38047	1,67758	6,30119	1,42046	3,14408
1,19582	5,04515	1,64052	3,90863	1,42800	3,14997
1,36665	8,49472	1,70084	4,49792	1,29818	0,61199
1,36665	9,12741	1,70084	3,46715	1,42315	4,44645
1,25970	1,88794	1,70084	8,19934	1,30455	2,36046
1,34967	3,83342	1,68676	1,19243	1,29610	0,66346
1,22443	5,57647	1,65601	2,27039	1,29610	0,69786
1,22443	4,64980	1,62939	7,09229	1,30949	2,26247
1,13024	3,45367	1,61220	3,68853	1,29818	2,52837
1,32370	8,98098	1,61220	3,25337	1,37324	2,93897
1,07813	2,63172	1,63359	5,71625	1,26053	3,18930
1,15514	4,95683	1,74395	6,10675	1,37734	3,86666
1,15514	4,31355	1,75395	6,87163	1,37734	2,19660
1,15514	5,51894	1,83142	13,16737	1,27147	1,26837
1,23944	5,03311	1,79008	10,51705	1,42735	7,70424
1,00485	2,27798	1,92778	14,00555	1,44622	2,64762
1,01291	2,66200	1,71204	6,35541	1,26793	1,26253
1,32627	6,10109	1,99738	12,36199	1,31295	1,85445
1,37832	7,14455	1,85471	13,80988	1,47109	1,09945
1,07589	3,50901	1,89149	12,38198	1,31662	0,74183
1,17443	3,55395	1,71954	2,71065	1,45659	4,64578
1,25272	5,63577	1,89149	12,60786	1,32417	3,58367
1,17619	4,44259	1,97378	10,60992	1,33144	1,93753
1,26026	6,05092	1,80929	11,51788	1,26933	2,52394
1,23182	3,86814	1,80929	5,41846	1,23156	3,34618
1,09724	3,52101	1,67827	11,15220	1,55563	7,08661
1,02683	2,51195	1,79042	13,67784	1,21791	2,89235
1,33488	4,44669	1,71237	7,50332	1,40071	2,39948
1,27647	6,87902	1,71237	11,44165	1,50909	2,70799
1,13381	3,41987	1,70000	3,75587	1,35628	6,38839
1,32278	4,86055	1,77491	7,94946	1,35413	5,77138
1,32278	6,28873	1,77491	2,77863	1,34640	4,44848
1,13381	2,60932	1,95240	10,30486	1,29952	4,51393
1,32278	7,08263	1,77491	2,94425	1,34141	3,21713
1,23070	5,14605	1,95240	10,36927	1,24241	4,59236
1,14309	3,64109	1,77491	10,08404	1,49758	3,07039
1,04783	0,26028	1,71308	6,30917	1,28648	1,51353

1,23966	1,72077	1,90342	10,80275	1,27477	2,46884
1,33502	6,14255	1,90342	3,56309	1,27477	4,15682
1,33502	4,82700	1,90342	10,40559	1,35893	4,77777
1,29572	5,70082	1,92490	15,30831	1,35893	3,99596
1,07977	0,70846	1,76449	11,74271	1,23539	3,81601
1,37650	3,60402	1,60408	8,96493	1,42212	1,80274
1,16473	2,05107	1,65238	6,59893	1,36080	2,53897
1,16473	1,65062	1,79008	11,96057	1,36080	5,07793
1,28710	1,96951	1,77893	2,90872	1,28316	2,61328
1,28710	2,64361	1,77893	11,92203	1,28316	2,83741
1,17984	1,64464	1,77893	1,49141	1,42735	1,50250
1,07258	2,88320	1,77893	5,70627	1,42897	3,50499
1,28710	4,37758	1,60104	1,39878	1,36118	3,09167
1,24420	4,46868	1,65149	5,24564	1,37513	3,74396
1,24420	2,70022	1,72932	8,51963	1,21717	5,51805
1,36861	2,59880	1,72932	9,47993	1,35050	1,03699
1,28912	4,11737	1,72932	14,06477	1,37324	3,47362
1,28912	2,60861	1,76246	15,19374	1,25628	1,65503
1,16021	1,84718	1,71237	9,11117	1,23146	1,55544
1,03130	1,29020	1,67790	12,08919	1,25213	2,43887
1,36753	1,11294	1,82121	11,52779	1,29610	5,39611
1,11889	0,47426	1,68045	6,94175	1,29610	3,26813
1,36753	2,65587	1,84849	9,74501	1,38320	4,41005
1,24321	0,50272	1,84849	10,30722	1,44416	5,19742
1,36753	2,75073	1,65582	10,20731	1,50085	6,05150
1,38740	2,96107	1,98611	9,16118	1,39364	7,21720
1,21397	3,05548	1,64851	4,34138	1,45086	7,51947
1,04055	1,25309	1,96120	8,21841	1,51262	2,65691
1,37827	1,08547	1,71605	4,70316	1,51262	8,06404
1,37827	2,87775	1,71605	4,60619	1,45444	3,13804
1,20599	1,61558	1,96120	2,83644	1,45567	4,27090
1,03370	0,67316	1,89253	8,14531	1,28109	4,89712
1,17852	2,12018	1,89253	9,85483	1,45883	3,16739
1,34688	0,98942	1,79401	10,59515	1,53811	0,92809
1,16607	0,99045	1,65601	7,18308	1,21791	2,65751
1,00563	0,26273	1,65601	3,69749	1,51611	4,53482
1,00563	0,99068	1,79401	5,69111	1,30019	2,93861
1,20676	2,57041	1,65601	4,02183	1,46291	7,85108
1,00563	1,95793	1,79401	7,00577	1,34141	0,62357
1,16716	2,57386	1,64713	4,57865	1,47556	5,93381
1,06989	2,31648	1,96513	10,87787	1,24450	2,13713
1,18465	3,91608	1,70312	8,41740	1,40007	0,86105
1,00239	2,40568	1,62292	6,12767	1,42046	2,62007
1,22539	3,33436	1,77157	1,34456	1,29512	3,12645
1,02116	1,27908	1,84209	5,13114	1,22071	1,69295
1,02116	0,29086	1,84209	9,95317	1,54174	2,74472
1,02116	2,27780	1,67462	6,92394	1,48320	1,17446
1,22090	2,53559	1,64769	2,62396	1,36080	5,83183
1,10991	1,32291	1,61745	6,17058	1,38855	8,27925
1,10991	2,57383	1,83480	7,52887	1,40949	2,33226
1,33189	5,35465	1,63094	6,30194	1,35472	1,17006
1,34915	5,08938	1,63094	4,85194	1,57080	2,00255
1,05680	0,84923	1,73649	3,43046	1,55781	5,47554
1,15057	2,91872	1,71629	4,02508	1,55781	8,18991
1,35977	6,08601	1,87232	9,05644	1,40524	7,11895
1,35977	5,73011	1,71629	6,90014	1,41566	8,39555
1,11448	2,71208	1,87232	6,21888	1,41566	8,57086
1,36214	3,05578	1,87232	7,78766	1,41566	8,75337
1,36214	3,47758	1,70276	2,74134	1,49758	4,18482
1,32872	4,37273	1,70276	7,28794	1,26200	2,13166
1,16263	1,96773	1,77962	2,76235	1,42897	2,91923
1,32872	2,75934	1,66840	4,58505	1,42897	3,45698
1,16263	2,30699	1,66840	6,79946	1,37734	2,71345
1,31422	4,16726	1,66783	2,83909	1,20252	4,42454
1,31422	5,58161	1,66783	6,62455	1,40129	6,45466
1,17202	1,88085	1,66783	8,20183	1,32158	2,28114
1,05482	1,35633	1,66783	2,13362	1,51174	2,46497
1,14355	1,83626	1,77157	4,95040	1,51262	4,73578
1,14355	2,07592	1,87698	2,65651	1,57080	6,13351
1,14355	3,34847	1,64236	3,95289	1,44895	3,58779
1,01649	1,77212	1,67758	4,97518	1,51611	6,48877
1,27061	3,59151	1,67758	4,15836	1,44574	3,02321
1,03266	1,75240	1,67758	6,61236	1,40250	7,05606
1,03266	2,08796	1,67758	5,60105	1,58666	2,90602
1,37689	4,45681	1,67758	8,86126	1,45444	3,06197
1,14740	4,02679	1,64052	4,35174	1,45659	3,66772
1,19135	4,64098	1,70084	5,34128	1,46347	5,80233
1,07222	2,04504	1,84258	5,65051	1,46291	6,47044
1,31049	4,00660	1,84258	4,45107	1,33713	3,56407
1,07222	2,25928	1,70084	6,22213	1,33713	4,42558
1,07222	0,40066	1,68676	1,23191	1,53811	3,85606
1,19135	2,10068	1,68676	4,67495	1,42046	7,37713
1,19135	3,28040	1,68676	3,71943	1,46272	2,62779

1,33840	4,29481	1,68676	4,67495	1,32370	1,41353
1,21673	3,38783	1,72362	6,68589	1,54631	1,12666
1,09506	0,78842	1,62939	4,37720	1,54631	3,07954
1,21673	3,05883	1,73969	4,43721	1,42212	1,27294
1,33472	2,66273	1,73969	6,81877	1,50085	10,03515
1,33472	4,62128	1,85436	8,88941	1,55524	7,03818
1,22349	4,62128	1,69983	6,54562	1,55563	3,56808
1,11227	3,05670	1,63539	1,10117	1,55781	6,05873
1,16987	0,92850	1,79893	4,69256	1,41641	4,32047
1,13826	0,64907	1,79893	6,43427	1,41641	3,02994
1,13826	2,55980	1,63539	4,42626	1,55821	5,98462
1,22241	3,80059	1,70785	1,27050	1,35618	5,46703
1,00015	1,76141	1,70785	1,25411	1,35618	4,98682
1,19721	3,13123	1,70000	4,75352	1,44110	6,22420
1,08837	3,15033	1,73091	4,96864	1,49729	3,54816
1,08837	2,84272	1,75876	7,41851	1,50787	5,36152
1,30605	1,91990	1,61220	6,21663	1,48617	1,09656
1,30605	3,26488	1,61220	3,25337	1,22071	1,65804
1,19721	3,07608	1,61220	5,58460	1,57080	8,45072
1,07478	2,96228	1,63359	4,58141	1,42897	3,01526
1,25463	0,53945	1,95873	2,54440	1,48014	3,65795
1,25463	1,96281	1,97713	11,98128	1,49758	1,12202
1,38009	4,08160	2,06548	17,09021	1,44011	3,89227
1,25463	5,18649	2,14005	4,58736	1,44011	5,46491
1,12917	2,12529	2,14005	15,78818	1,44011	2,81109
1,25463	2,45351	1,99738	17,28863	1,58800	7,64187
1,00370	1,22838	1,89149	3,21262	1,58900	3,98865
1,00370	1,16989	2,06344	4,91933	1,58900	6,87698
1,12917	0,89041	1,89149	22,42142	1,48338	2,97518
1,00370	1,12114	2,13826	11,77416	1,53884	7,53269
1,21110	0,47061	1,97378	15,64030	1,51931	4,17964
1,33221	2,41150	2,13826	27,82450	1,35050	3,79967
1,21110	2,14843	2,01298	28,95150	1,32278	2,13187
1,08999	1,84151	2,06556	25,40223	1,29151	2,49445
1,21110	3,44626	1,94102	2,73338	1,50909	9,37698
1,39764	1,82410	2,12989	22,92832	1,46272	2,64899
1,39764	4,99162	1,95240	9,38478	1,46272	2,88210
1,24235	2,21850	2,12989	8,41870	1,55805	4,06798
1,24235	0,78264	1,95240	10,36927	1,40949	0,91015
1,24235	1,47900	2,09376	6,22974	1,58068	6,39710
1,08706	1,15855	2,09376	11,30204	1,52320	3,29795
1,22599	1,83143	2,09376	19,34736	1,58412	5,22902
1,22599	0,47605	1,90342	3,81273	1,39510	2,87975
1,11661	0,36425	1,90342	16,85093	1,58666	7,55547
1,22828	1,54864	1,92490	20,20506	1,57386	3,27345
1,29380	5,46469	2,13472	10,00450	1,48014	2,27189
1,17619	2,80597	2,13472	12,12583	1,57683	11,36883
1,05857	1,83406	1,95682	9,67102	1,59229	5,77939
1,29380	1,92777	1,80163	8,67034	1,59229	1,10273
1,17619	2,36152	1,83272	4,66610	1,59229	3,98579
1,33827	3,77958	1,83469	10,34265	1,47840	5,64457
1,33827	3,92565	1,96131	12,05713	1,58366	4,28896
1,11523	1,81447	1,84849	5,30978	1,51038	4,05289
1,22675	4,10824	1,84849	5,37225	1,51174	1,31021
1,11523	0,76231	1,84849	11,38479	1,20894	5,31243
1,11523	2,98989	1,91056	12,79144	1,43575	3,22446
1,13347	1,08716	1,96120	8,14568	1,46272	5,73594
1,06956	0,27227	1,96120	2,90917	1,58900	9,85700
1,21803	3,18332	2,05035	19,45589	1,58366	2,73166
1,21803	4,94552	2,01643	14,67812	1,42881	3,03733
1,21803	5,85369	1,89253	15,78783	1,48338	3,66417
1,11837	1,23817	1,93201	7,97880	1,42875	6,65145
1,32171	3,88053	1,93201	11,10545	1,54432	3,39246
1,32086	7,52846	1,90054	26,10635	1,29780	2,73690
1,15576	5,22326	1,96513	7,32591	1,38220	3,34460
1,14850	3,81920	1,96513	7,79210	1,22922	0,55365
1,11355	0,99928	1,84209	6,25937	1,22198	1,47080
1,14430	2,77378	1,84209	13,72424	1,28648	2,34737
1,08963	3,50263	1,92230	7,08809	1,20109	2,53372
1,11668	1,59117	1,88527	3,21400	1,25608	2,39763
1,10280	2,22222	1,99720	1,61728	1,20541	3,24226
1,32877	3,46095	2,03867	13,66350	1,35360	2,24441
1,23200	2,25206	1,83480	7,64041	1,32377	0,32134
1,39759	6,07007	2,15473	18,70035	1,37079	3,29902
1,29777	7,49100	1,87232	11,62524	1,33189	1,38366
1,29777	2,99083	1,87232	11,34399	1,33189	0,41622
1,29777	6,23049	2,18437	11,53149	1,28461	1,69390
1,23423	4,50050	2,02834	12,30651	1,30273	1,82976
1,33597	5,46486	2,08115	19,36766	1,43370	2,48352
1,23321	3,30392	1,89196	10,99878	1,22506	0,56024
1,33401	3,11686	1,87698	7,65076	1,31295	3,15717
1,09146	1,46745	1,97413	11,85029	1,21040	1,57570
1,33713	2,58060	1,83142	13,16737	1,22387	2,25174

1,33713	5,23202	2,06548	19,22541	1,35360	1,11607
1,20342	2,34064	1,92778	14,00555	1,22071	1,15190
1,33713	3,65848	2,06548	16,91836	1,27920	2,11940
1,20342	2,92678	1,99738	12,36199	1,25608	1,18092
1,21444	2,10683	1,85471	13,80988	1,20109	0,65153
1,06263	1,12825	1,89149	12,38198	1,21724	1,45377
1,38261	0,84713	1,89149	12,60786	1,23709	1,73210
1,07536	1,55706	1,97378	10,60992	1,28850	0,96794
1,38261	2,98287	1,80929	11,51788	1,22631	2,77239
1,22898	1,91500	2,13826	16,08696	1,23156	2,78502
1,34544	1,44719	1,80929	5,41846	1,42046	1,53929
1,34544	1,39152	2,13826	21,98136	1,28316	2,52744
1,17509	3,34011	2,01298	25,85353	1,42573	4,06298
1,29259	1,84761	2,06556	22,04949	1,47085	0,66482
1,15147	3,81480	2,16937	25,60704	1,33856	0,61564
1,27941	1,02004	2,12989	15,48489	1,21333	3,15461
1,15147	1,83331	2,12989	19,61604	1,26933	3,06238
1,15147	2,08487	1,95240	10,30486	1,44011	4,36407
1,15147	1,48870	1,95240	10,36927	1,32101	3,00950
1,15147	1,80574	2,09376	10,75736	1,26053	1,53522
1,02353	1,16822	1,90342	10,80275	1,36118	0,67228
1,26168	0,63013	1,90342	3,56309	1,31295	2,57478
1,22878	0,57793	2,09376	21,97996	1,25267	1,10062
1,36715	3,01487	1,90342	10,40559	1,31662	0,66456
1,13929	2,24838	2,09376	21,09486	1,27120	2,87984
1,13929	0,38690	2,09376	7,71625	1,21361	0,80879
1,36715	4,92502	2,08531	21,76034	1,28109	1,64277
1,36715	3,34823	1,92490	15,30831	1,22198	0,41282
1,25322	2,23378	1,82121	11,52779	1,27383	2,86977
1,15801	3,12309	1,84849	9,74501	1,28683	3,44096
1,06151	3,23843	1,84849	10,30722	1,24617	1,99979
1,06151	0,83401	1,98611	9,16118	1,37079	3,99959
1,02718	3,26716	1,96120	8,21841	1,32222	3,92540
1,34448	6,39843	1,96120	2,83644	1,45659	3,05644
1,34448	5,59863	1,89253	8,14531	1,25213	1,79604
1,16521	4,30472	1,89253	9,85483	1,37734	2,69729
1,21532	1,96911	2,02724	25,16920	1,42638	2,55620
1,30064	4,28676	1,96513	10,87787	1,50676	3,51245
1,08387	0,69560	1,84209	5,13114	1,50676	4,88591
1,19226	1,91710	1,84209	9,95317	1,46492	2,08706
1,20067	5,07663	2,00955	15,36250	1,27477	3,37128
1,10831	2,06125	2,19692	11,96115	1,27477	1,66927
1,10831	1,89790	1,83480	7,52887	1,22071	2,30380
1,30465	8,02917	2,03867	2,21683	1,43370	1,60797
1,27902	1,82307	2,03867	7,91926	1,29952	3,58606
1,27902	4,37936	2,15473	12,74126	1,36459	2,37452
1,08387	1,65520	1,87232	9,05644	1,30019	2,35230
1,19226	3,92220	1,87232	6,21888	1,20727	2,93116
1,08387	0,69141	2,02834	8,57518	1,28316	3,63856
1,31059	5,53058	1,87232	7,78766	1,22959	2,66208
1,20137	1,60344	2,08115	13,13836	1,57008	2,44036
1,31059	3,08683	2,12270	10,53046	1,30560	3,35686
1,20137	1,68275	1,87698	2,65651	1,24625	3,81907
1,23280	4,54958	1,84258	5,65051	1,40392	2,82227
1,02365	2,28749	1,84258	4,45107	1,48794	0,77788
1,24010	3,37782	1,85436	8,88941	1,33144	3,71166
1,13676	4,09333	2,18546	8,24445	1,44011	4,57539
1,23376	1,21192	1,95873	2,54440	1,35618	0,68133
1,23376	1,57875	2,17722	14,84139	1,35618	2,58576
1,23376	3,83079	2,06548	17,09021	1,29818	0,68147
1,12160	2,56315	2,14005	4,58736	1,44242	3,53083
1,18484	0,42970	2,14005	15,78818	1,27120	1,19613
1,06635	0,43518	2,23540	13,38592	1,49632	1,44963
1,18484	0,90320	2,06344	4,91933	1,30117	3,46078
1,30332	3,33362	2,13826	11,77416	1,28648	3,36340
1,06639	0,30331	2,30274	21,01482	1,21956	1,69533
1,06639	1,30105	2,13826	27,82450	1,27589	2,51899
1,06639	0,32925	2,01298	28,95150	1,23146	3,08560
1,32278	2,03730	2,06556	25,40223	1,27991	2,61284
1,08227	2,16320	2,20162	3,48067	1,22198	3,18072
1,19226	2,11735	2,32393	4,87776	1,22198	2,17913
1,19226	0,80046	2,32393	9,48453	1,22198	2,11145
1,23636	1,81611	2,28355	24,24770	1,25628	1,80722
1,19604	1,11223	2,30738	24,63966	1,55563	3,74153
1,19604	2,13177	2,12989	22,92832	1,24666	3,36253
1,19604	3,27103	2,12989	8,41870	1,40949	1,66861
1,32893	0,60632	2,09376	6,22974	1,21563	4,25833
1,07140	2,48733	2,09376	11,30204	1,34352	2,36934
1,30949	4,58047	2,09376	19,34736	1,22054	5,21738
1,19045	4,15296	2,28410	21,67358	1,30773	3,57420
1,07140	2,21528	2,28410	32,21534	1,22257	3,64031
1,30949	5,01630	2,28410	8,98716	1,22959	3,09350
1,07140	2,27358	2,13472	10,00450	1,40129	2,91820

1,35755	2,61588	2,13472	12,12583	1,35535	3,60371
1,35755	3,85950	2,20635	6,30321	1,25608	0,66651
1,24442	5,75590	2,05035	19,45589	1,23200	2,78979
1,13129	0,36213	2,01643	14,67812	1,29952	1,24760
1,01816	1,90116	2,03867	13,66350	1,29952	2,42833
1,13129	0,38357	2,24254	16,39620	1,32417	2,20063
1,34232	3,75182	2,31531	4,46758	1,25639	3,49831
1,34232	4,58786	2,15473	18,70035	1,31422	3,46009
1,11860	3,84164	2,18437	11,53149	1,30379	1,43510
1,11860	2,67164	2,02834	12,30651	1,25815	1,87450
1,00674	2,32157	2,27035	24,33772	1,30560	1,20796
1,34232	3,20597	2,08115	19,36766	1,25504	0,43502
1,34232	4,03050	2,34622	3,20907	1,59810	3,34240
1,16394	2,77213	2,39401	8,85450	1,31849	4,02092
1,05813	2,85205	2,15710	15,46397	1,44110	3,31159
1,26976	4,48570	2,06548	19,22541	1,25475	3,16036
1,16394	3,13083	2,06548	16,91836	1,20269	1,25184
1,05813	1,68433	2,23540	15,56113	1,26053	2,03045
1,37557	4,11725	2,23540	19,97849	1,26053	2,27312
1,26976	2,96317	2,13826	16,08696	1,50676	0,87248
1,11100	1,18673	2,13826	21,98136	1,26933	2,86720
1,10280	0,75096	2,01298	25,85353	1,20727	2,59753
1,08586	0,28491	2,06556	22,04949	1,35455	3,29374
1,26442	4,60267	2,16937	25,60704	1,26793	3,71452
1,12939	0,78603	2,12989	15,48489	1,26793	2,96355
1,12939	3,66540	2,30738	34,39247	1,33144	2,43650
1,22351	5,04816	2,12989	19,61604	1,28316	2,55605
1,11404	1,87681	2,09376	10,75736	1,28316	1,95996
1,30795	5,64093	2,28410	15,88640	1,36459	0,78577
1,20734	2,48027	2,09376	21,97996	1,32394	2,14350
1,30795	6,30122	2,09376	21,09486	1,28607	2,93843
1,00611	0,28322	2,09376	7,71625	1,28607	2,55432
1,27071	3,85573	2,28410	25,07781	1,28607	2,61674
1,36846	7,40104	2,08531	21,76034	1,30019	2,58541
1,28047	3,54744	2,20635	9,60027	1,46272	5,38980
1,28047	6,12311	2,27817	9,45556	1,21925	3,11743
1,08348	3,67953	2,21807	22,70522	1,22054	3,87405
1,28047	4,72678	2,02724	25,16920	1,27920	2,75341
1,08348	3,53801	2,34885	2,90494	1,33307	1,53396
1,03901	0,51307	2,00955	15,36250	1,31605	4,08965
1,39234	6,00102	2,19692	11,96115	1,44011	3,36642
1,27508	4,88308	2,24254	9,36926	1,44011	4,01022
1,36045	6,51757	2,03867	2,21683	1,29610	3,09613
1,23751	1,83922	2,24254	9,53657	1,29610	2,16237
1,12501	2,53039	2,03867	7,91926	1,39898	2,90386
1,35001	3,35511	2,31531	4,50747	1,22506	2,42769
1,23751	3,60815	2,15473	12,74126	1,22547	3,78766
1,01251	2,53039	2,02834	8,57518	1,44242	4,02959
1,23751	3,67844	2,27035	23,17878	1,33780	2,79291
1,12501	3,19579	2,08115	13,13836	1,23049	1,99389
1,12501	1,54635	2,12270	10,53046	1,35360	0,56110
1,30999	4,55789	2,24222	3,48593	1,48247	1,76840
1,19090	2,89037	2,18546	8,24445	1,36080	3,57636
1,30999	3,73524	2,36329	15,84177	1,45883	3,85706
1,30999	1,86762	2,47857	13,61030	1,35535	2,20490
1,19090	2,08440	2,23540	13,38592	1,31662	3,35371
1,07181	2,56798	2,30274	21,01482	1,31662	0,69032
1,25831	0,62510	2,20162	3,48067	1,24450	2,55217
1,39813	2,60833	2,44625	4,72721	1,30455	3,65322
1,25831	2,24856	2,32393	4,87776	1,30751	0,90089
1,39813	1,36713	2,32393	9,48453	1,37324	3,31675
1,39813	2,57235	2,28355	24,24770	1,30560	2,14890
1,39813	0,71954	2,30738	24,63966	1,20492	4,00790
1,05347	1,00957	2,48488	34,61329	1,31723	2,63255
1,05347	2,08645	2,28410	21,67358	1,40949	3,69749
1,20396	0,72913	2,28410	32,21534	1,39564	0,67993
1,35446	2,20423	2,47444	25,59979	1,53521	4,26742
1,39409	5,97415	2,28410	8,98716	1,45444	3,06197
1,11528	1,97949	2,20635	6,30321	1,32417	2,13950
1,28065	3,37509	2,47153	4,94122	1,45659	1,92555
1,28065	2,20731	2,44641	12,89667	1,25815	2,21204
1,12057	1,22853	2,24254	16,39620	1,31849	2,30941
1,34304	1,43947	2,31531	4,46758	1,31849	0,47322
1,29246	1,88504	2,58567	33,13715	1,31849	3,08582
1,29246	2,07147	2,58567	32,59392	1,31849	2,28107
1,10782	0,81823	2,27035	24,33772	1,31849	3,35502
1,29919	0,90913	2,34622	3,20907	1,26277	5,08595
1,29919	2,38912	2,46238	10,23648	1,35050	2,46979
1,13679	1,35313	2,40400	11,95445	1,51931	3,11098
1,13679	1,40951	2,39401	8,85450	1,49847	2,46963
1,06135	1,54833	2,30696	15,93261	1,47085	3,14708
1,22122	2,48146	2,23540	15,56113	1,20470	2,46257
1,02055	2,24567	2,23540	19,97849	1,20727	2,06532

1,13394	1,42034	2,30738	34,39247	1,34141	4,36894
1,02055	1,25719	2,28410	15,88640	1,20727	2,06532
1,29364	1,73127	2,28410	25,07781	1,22090	3,56827
1,03491	1,70990	2,20635	9,60027	1,20252	2,19074
1,29364	0,54859	2,27817	9,45556	1,36406	5,34068
1,27210	4,84894	2,21807	22,70522	1,46149	4,13787
1,15382	0,46461	2,34885	2,90494	1,39549	3,76782
1,15382	1,27940	2,24254	9,36926	1,27991	4,00999
1,33875	0,81237	2,24254	9,53657	1,28042	2,59820
1,04125	1,26730	2,31531	4,50747	1,50676	0,94003
1,22599	2,81896	2,58567	33,64746	1,28109	0,89936
1,07274	1,54569	2,45954	22,92248	1,28116	1,79569
1,37924	3,26905	2,27035	23,17878	1,28154	3,75482
1,22599	2,06092	2,24222	3,48593	1,56830	3,81500
1,07274	1,18444	2,46238	8,64414	1,57008	4,95728
1,37751	2,62100	2,53194	17,99790	1,21741	3,22146
1,20532	1,37770	2,47857	13,61030	1,28562	0,45709
1,37751	1,08368	2,44625	4,72721	1,41513	4,58964
1,20532	1,52892	2,48488	34,61329	1,21925	2,11102
1,31264	1,97066	2,47444	25,59979	1,49180	5,72560
1,25893	1,28762	2,66479	31,13734	1,35765	0,59295
1,31146	2,13785	2,62135	13,55837	1,23420	3,32358
1,35122	4,52172	2,78926	4,96651	1,23055	2,55409
1,05095	1,53694	2,47153	4,94122	1,41089	2,00049
1,38838	0,80342	2,44641	12,89667	1,41089	3,40725
1,23411	2,08406	2,58567	33,13715	1,44011	2,71280
1,07985	1,18399	2,58567	32,59392	1,44011	3,39100
1,23411	3,66069	2,46238	10,23648	1,58412	4,65893
1,28316	2,57513	2,40400	11,95445	1,44011	3,10596
1,14058	1,53077	2,50253	21,73803	1,29610	1,91665
1,28316	0,67239	2,58567	33,64746	1,37771	5,72274
1,28316	4,50647	2,45954	22,92248	1,35893	2,49747
1,37638	7,88058	2,46238	8,64414	1,35893	1,00519
1,25789	1,13720	2,72460	21,62311	1,29760	4,45598
1,20764	1,57155	2,66479	31,13734	1,29818	2,42960
1,03512	0,67593	2,82300	36,83021	1,58666	0,88394
1,20764	2,35732	2,62135	13,55837	1,35011	5,01345
1,38016	1,92641	2,78926	4,96651	1,36080	4,85986
1,20764	1,57155	2,81208	42,98157	1,40781	3,20990
1,03512	0,66748	2,82300	42,01073	1,40781	6,56191
1,28959	0,69709	2,80115	43,95240	1,46272	1,93553
1,28959	2,71090	2,82300	36,83021	1,50315	4,49077
1,14631	1,72820	2,82300	36,83021	1,25475	4,18371
1,00302	1,52488	2,81208	42,98157	1,25475	4,87598
1,27419	2,39079	2,82300	42,01073	1,54524	3,33273
1,13262	2,59158	2,80115	43,95240	1,39510	3,97929
1,27419	5,21118			1,49808	3,16948
1,13262	1,45689			1,37324	1,15254
1,18261	3,69857			1,37324	3,63050
1,13322	1,54724	--	--	1,35628	4,80711
1,13322	2,84260	--	--	1,39898	3,14145
1,03020	2,05638	--	--	1,41005	3,62492
1,31613	2,29582	--	--	1,37513	1,91160
1,18451	2,07074	--	--	1,31849	3,67805
1,05290	2,13826	--	--	1,25639	2,61068
1,05290	1,86067	--	--	1,44110	1,65865
1,02415	0,66286	--	--	1,36406	6,11762
1,19485	1,63669	--	--	1,51038	5,03843
1,02415	0,68741	--	--	1,32333	3,30995
1,36554	2,89694	--	--	1,58900	2,02871
1,18327	3,18415	--	--	1,24666	3,69878
1,10382	1,86696	--	--	1,38320	3,83296
1,22647	1,38429	--	--	1,53521	3,00598
1,34911	2,84143	--	--	1,43856	2,68903
1,22647	2,50446	--	--	1,22599	1,10898
1,22647	4,01625	--	--	1,59810	2,16867
1,10382	1,91250	--	--	1,39626	3,27440
1,08256	2,70556	--	--	1,55524	3,73565
1,17418	1,01583	--	--	1,39188	4,09561
1,04372	1,30450	--	--	1,25664	3,09311
1,04372	1,19487	--	--	1,24772	3,13109
1,21401	0,56137	--	--	1,41566	6,12376
1,34890	2,56858	--	--	1,39549	2,77929
1,12784	2,71949	--	--	1,39626	3,68079
1,01505	2,18125	--	--	1,38539	4,58141
1,28000	1,45581	--	--	1,51402	5,03228
1,20061	1,04153	--	--	1,27577	3,08534
1,21412	2,42339	--	--	1,39364	6,30086
1,06543	3,94946	--	--	1,39052	4,33870
1,16904	4,20629	--	--	1,57750	3,95325
1,24367	4,87706	--	--	1,34141	3,31245
1,06600	3,19754	--	--	1,34141	4,68271
1,24367	5,61992	--	--	1,45548	2,78502

1,21412	2,42339	--	--	1,55805	6,48071
1,06543	3,94946	--	--	1,51402	3,05511
1,16904	4,20629	--	--	1,34580	2,72610
1,24367	4,87706	--	--	1,34580	3,60346
1,06600	3,19754	--	--	1,34640	4,88078
1,24367	5,61992	--	--	1,50909	3,37984
1,24367	3,96694	--	--	1,35050	2,77851
1,15483	3,06373	--	--	1,35413	4,25260
1,18465	4,77401	--	--	1,35413	4,29429
1,25548	1,99201	--	--	1,29997	4,01235
1,25548	1,96088	--	--	1,56830	2,44637
1,23237	3,67552	--	--	1,35608	4,61009
1,04277	2,29615	--	--	1,35608	2,99459
1,34520	4,38096	--	--	1,49180	0,68543
1,24247	3,62955	--	--	1,42897	5,05583
1,11823	1,51494	--	--	1,22188	0,60118
1,36672	2,25979	--	--	1,25413	1,09696
1,24247	0,52076	--	--	1,48451	4,96267
1,36672	2,15879	--	--	1,48451	5,76330
1,36672	3,96410	--	--	1,48451	2,66358
1,32455	0,50276	--	--	1,22506	1,76370
1,20414	2,49943	--	--	1,36118	3,41121
1,20414	3,15445	--	--	1,30209	4,36405
1,24247	2,87839	--	--	1,29818	3,37676
1,24247	3,62955	--	--	1,42800	2,77197
1,11823	1,60963	--	--	1,30455	4,17472
1,36672	5,26443	--	--	1,42315	4,61936
1,24247	2,95414	--	--	1,44011	2,73246
1,36672	1,09833	--	--	1,44011	1,62178
1,12325	2,27732	--	--	1,42854	4,69706
1,12325	2,54149	--	--	1,44242	0,71110
1,26366	3,27935	--	--	1,58666	4,79995
1,12325	2,18623	--	--	1,37324	5,57701
1,26366	1,72166	--	--	1,48972	5,46737
1,12325	1,54403	--	--	1,37734	2,15784
1,12325	1,89473	--	--	1,37734	4,23168
1,00028	1,19554	--	--	1,48338	3,16309
1,28607	3,49539	--	--	1,33219	7,25196
1,00028	1,59405	--	--	1,31475	4,56229
1,28607	3,14489	--	--	1,49847	3,29872
1,28607	2,96724	--	--	1,58366	2,73166
1,00028	1,55564	--	--	1,45883	3,55054
1,39409	2,74633	--	--	1,58666	4,99044
1,39409	3,93224	--	--	1,30763	2,50071
1,39409	3,58449	--	--	1,46291	0,80881
1,39409	3,32145	--	--	1,32417	4,16057
1,11528	1,49800	--	--	1,45659	4,91704
1,11528	1,40437	--	--	1,45248	0,53399
1,03024	0,46038	--	--	1,52320	5,35076
1,15902	0,49903	--	--	1,56744	4,64170
1,15902	0,88561	--	--	1,24450	2,97340
1,03024	1,13864	--	--	1,58328	4,39946
1,24493	1,50492	--	--	1,40071	3,63877
1,24493	1,77796	--	--	1,20061	0,98879
1,28381	3,90085	--	--	1,29350	3,64981
1,28381	5,17225	--	--	1,44670	7,33717
1,28381	3,71749	--	--	1,45086	6,89707
1,17683	2,85915	--	--	1,45860	5,91271
1,06984	1,61192	--	--	1,51611	3,91207
1,28381	2,77251	--	--	1,47556	5,43337
1,17683	2,43400	--	--	1,58124	6,77119
1,27563	3,62645	--	--	1,33118	3,21443
1,27563	3,37344	--	--	1,54378	4,54059
1,27563	4,27303	--	--	1,55805	4,62908
1,37354	2,97136	--	--	1,55805	6,48071
1,22093	2,52682	--	--	1,48247	6,00634
1,06831	1,29851	--	--	1,48247	5,28968
1,06831	1,19322	--	--	1,42212	4,25617
1,28316	0,72008	--	--	1,48451	1,74768
1,28316	3,74824	--	--	1,48451	5,55146
1,21375	1,10335	--	--	1,56830	1,53554
1,25580	0,93539	--	--	1,56830	4,84028
1,04061	0,99385	--	--	1,42735	1,54078
1,16248	1,02918	--	--	1,42897	4,43646
1,13973	1,64067	--	--	1,49729	5,35336
1,13973	2,00290	--	--	1,48972	2,89711
1,06857	0,63206	--	--	1,51931	3,13473
1,06857	0,57629	--	--	1,49808	3,34236
1,24666	1,85899	--	--	1,58412	7,37173
1,20792	1,11437	--	--	1,58412	4,05445
1,20792	1,08752	--	--	1,49847	5,60202
1,13041	0,72626	--	--	1,44416	3,46495
1,32697	1,16882	--	--	1,39364	4,55941

1,19427	2,10695	--	--	1,50085	6,96987
1,32697	1,21496	--	--	1,45086	7,59988
1,26805	1,08034	--	--	1,39626	2,39770
1,39485	4,01603	--	--	1,39626	6,17958
1,01444	1,64399	--	--	1,45444	2,46479
1,29402	3,28669	--	--	1,45567	4,24040
1,29895	2,61802	--	--	1,45883	3,98478
1,29895	2,01871	--	--	1,38430	3,29322
1,24821	2,23130	--	--	1,40781	4,50975
1,24821	2,02504	--	--	1,46291	7,04743
1,12577	2,31559	--	--	1,47556	5,67962
1,26649	2,86124	--	--	1,55563	3,61764
1,26649	3,27392	--	--	1,53884	3,14408
1,25118	1,29305	--	--	1,42315	5,35220
1,13743	2,98563	--	--	1,48320	4,40421
1,25118	3,38275	--	--	1,32104	3,11185
1,02369	2,24467	--	--	1,32104	3,08222
1,13743	2,18656	--	--	1,58691	7,01256
1,12880	2,55161	--	--	1,56610	4,67717
1,31907	3,79214	--	--	1,35268	4,60209
1,17251	2,77158	--	--	1,41372	2,48724
1,02595	1,53343	--	--	1,42800	3,20037
1,31907	3,95274	--	--	1,42800	5,57274
1,17251	1,80282	--	--	1,58090	7,89260
1,31907	4,68319	--	--	1,57296	8,35233
1,16860	1,99989	--	--	1,57296	8,50202
1,07122	1,92087	--	--	1,57296	8,94789
1,16860	1,71419	--	--	1,49758	4,13175
1,24174	2,16584	--	--	1,57187	5,95369
1,24174	0,82846	--	--	1,57187	5,64640
1,05035	2,23090	--	--	1,40071	2,61042
1,36545	5,90522	--	--	1,51174	4,13049
1,26042	4,08999	--	--	1,51262	6,31437
1,05035	2,07646	--	--	1,45860	6,94465
1,39427	4,94925	--	--	1,58068	5,88939
1,09550	0,94597	--	--	1,42597	2,76766
1,39427	6,46085	--	--	1,51611	7,30587
1,23200	2,61900	--	--	1,59031	7,05581
1,13723	3,93830	--	--	1,45444	2,69301
1,32677	6,04470	--	--	1,58666	4,31338
1,04246	2,36690	--	--	1,58900	5,28763
1,07773	2,92491	--	--	1,58543	3,49214
1,07773	2,53492	--	--	1,53811	6,41878
1,18827	3,27979	--	--	1,33856	3,19661
1,18827	3,03098	--	--	1,46347	2,33473
1,17643	1,10505	--	--	1,54631	5,63330
1,30455	1,48215	--	--	1,54631	5,20767
1,30455	4,70994	--	--	1,48891	2,90733
1,06736	2,50318	--	--	1,55524	6,53739
1,30455	4,28176	--	--	1,35268	4,04821
1,06736	2,32752	--	--	1,55563	4,64594
1,35025	5,35106	--	--	1,46419	3,63174
1,05020	2,04485	--	--	1,46419	2,07816
1,20023	2,83390	--	--	1,55781	5,61594
1,35025	3,58405	--	--	1,55821	6,26799
1,20023	1,86704	--	--	1,57080	8,78540
1,05020	2,02262	--	--	1,50315	6,08601
1,33898	3,11697	--	--	1,58800	6,95547
1,17161	1,08014	--	--	1,58900	5,22650
1,17161	1,80537	--	--	1,58900	5,84543
1,33441	2,32543	--	--	1,53093	4,51013
1,14378	1,01452	--	--	1,55781	5,75994
1,14378	2,53061	--	--	1,46315	3,15563
1,35349	2,19949	--	--	1,46333	3,53477
1,35349	3,44194	--	--	1,28697	2,86330
1,05271	1,56147	--	--	1,51915	3,55364
1,35349	3,49231	--	--	1,36363	2,42708
1,05271	1,90286	--	--	1,54463	4,49647
1,35349	4,03519	--	--	1,73270	17,44131
1,30628	4,09211	--	--	1,50909	1,79708
1,06877	2,17970	--	--	1,75345	0,77390
1,18752	2,88790	--	--	1,47241	3,76490
1,21728	2,01989	--	--	1,42573	2,34623
1,01440	1,35862	--	--	1,48794	3,93418
1,11584	0,98418	--	--	1,57605	1,87049
1,31872	2,47677	--	--	1,53155	1,45048
1,14882	3,53853	--	--	1,42735	1,55992
1,32557	6,30144	--	--	1,46994	1,07537
1,32557	7,00778	--	--	1,40839	1,97523
1,28124	5,57017	--	--	1,61688	2,95530
1,34967	5,35096	--	--	1,40007	3,14685
1,25970	2,94519	--	--	1,74464	2,18767
1,34967	5,85801	--	--	1,40250	4,52073

1,16972	3,46422	--	--	1,51931	1,11615
1,25548	2,96430	--	--	1,47241	3,45313
1,31861	5,13926	--	--	1,47241	3,17688
1,22443	4,02561	--	--	1,48247	5,67748
1,03605	2,07193	--	--	1,42800	4,89235
1,00112	2,37020	--	--	1,42800	3,36956
1,30916	5,11163	--	--	1,62608	5,23545
1,07813	4,41425	--	--	1,46347	3,53747
1,23215	5,49189	--	--	1,53811	3,71235
1,39437	5,54178	--	--	1,48617	5,00119
1,07663	2,61931	--	--	1,48617	6,37930
1,01291	2,45963	--	--	1,40250	4,26543
1,32627	6,16669	--	--	1,43032	2,91986
1,08297	1,68015	--	--	1,41372	3,29082
1,24141	4,29811	--	--	1,42597	3,21496
1,23944	3,67693	--	--	1,74533	2,47805
1,23474	2,00080	--	--	1,40335	3,56710
1,05559	2,24640	--	--	1,50909	2,30818
1,17443	3,96305	--	--	1,40830	3,91193
1,25272	5,10505	--	--	1,49341	2,71768
1,17619	3,72702	--	--	1,46315	5,58998
1,26026	5,38512	--	--	1,49729	2,11644
1,31981	4,55075	--	--	1,42046	3,14408
1,39649	3,33157	--	--	1,42800	3,14997
1,29674	2,50848	--	--	1,42315	4,44645
1,09724	1,92709	--	--	1,42735	7,70424
1,33488	2,49414	--	--	1,44622	2,64762
1,33488	2,72217	--	--	1,79800	5,92840
1,32278	4,03889	--	--	1,47109	1,09945
1,32278	4,06110	--	--	1,45659	4,64578
1,23070	2,14861	--	--	1,74533	0,62211
1,33502	6,64052	--	--	1,55563	7,08661
1,23966	3,55283	--	--	1,40071	2,39948
1,18775	2,79655	--	--	1,60081	1,54252
1,07977	1,70693	--	--	1,50909	2,70799
1,37650	2,39096	--	--	1,49758	3,07039
1,37650	3,72123	--	--	1,42212	1,80274
1,16473	2,87150	--	--	1,42735	1,50250
1,05884	2,49254	--	--	1,42897	3,50499
1,17984	0,37157	--	--	1,44416	5,19742
1,39436	2,39996	--	--	1,50085	6,05150
1,39436	3,63445	--	--	1,45086	7,51947
1,17984	1,69540	--	--	1,51262	2,65691
1,39436	3,70958	--	--	1,51262	8,06404
1,39436	2,72888	--	--	1,45444	3,13804
1,11978	2,16778	--	--	1,45567	4,27090
1,36861	3,34675	--	--	1,45883	3,16739
1,24420	2,07271	--	--	1,53811	0,92809
1,24420	0,51976	--	--	1,51611	4,53482
1,28912	3,21493	--	--	1,46291	7,85108
1,28912	1,61804	--	--	1,78619	2,22932
1,28912	2,01638	--	--	1,47556	5,93381
1,28912	2,37947	--	--	1,40007	0,86105
1,16021	2,03049	--	--	1,42046	2,62007
1,36753	4,29999	--	--	1,54174	2,74472
1,36753	1,73580	--	--	1,48320	1,17446
1,24321	2,63690	--	--	1,65130	5,44574
1,36753	3,79411	--	--	1,65130	5,48279
1,24321	2,21955	--	--	1,40949	2,33226
1,11889	1,53345	--	--	1,62321	3,70611
1,38740	0,96986	--	--	1,57080	2,00255
1,37827	2,97872	--	--	1,55781	5,47554
1,37827	3,26481	--	--	1,55781	8,18991
1,03370	1,24534	--	--	1,40524	7,11895
1,37827	3,82858	--	--	1,41566	8,39555
1,03370	1,27900	--	--	1,41566	8,57086
1,01016	1,13076	--	--	1,41566	8,75337
1,01016	1,08365	--	--	1,49758	4,18482
1,05689	1,24109	--	--	1,42897	2,91923
1,00563	1,07937	--	--	1,42897	3,45698
1,10619	1,54626	--	--	1,60081	1,48978
1,10619	2,65073	--	--	1,40129	6,45466
1,27577	3,57366	--	--	1,51174	2,46497
1,27577	3,56743	--	--	1,51262	4,73578
1,32751	3,91082	--	--	1,57080	6,13351
1,22539	2,82273	--	--	1,44895	3,58779
1,22539	2,96815	--	--	1,60422	2,29241
1,02116	2,29357	--	--	1,51611	6,48877
1,12327	0,31364	--	--	1,44574	3,02321
1,32751	3,23273	--	--	1,40250	7,05606
1,22090	0,78745	--	--	1,58666	2,90602
1,22090	0,75595	--	--	1,45444	3,06197
1,33189	3,13180	--	--	1,45659	3,66772

1,25278	3,68892	--	--	1,46347	5,80233
1,24895	1,45915	--	--	1,46291	6,47044
1,35977	4,24627	--	--	1,53811	3,85606
1,36214	1,67786	--	--	1,42046	7,37713
1,36214	1,13732	--	--	1,74012	2,37970
1,23831	3,12139	--	--	1,46272	2,62779
1,32872	2,03558	--	--	1,62608	4,10346
1,32872	2,55579	--	--	1,54631	1,12666
1,32872	2,71411	--	--	1,54631	3,07954
1,31422	1,99804	--	--	1,61298	3,69624
1,31422	3,13176	--	--	1,42212	1,27294
1,19475	1,92508	--	--	1,50085	10,03515
1,19475	3,05599	--	--	1,55524	7,03818
1,05482	1,64243	--	--	1,75848	5,78723
1,27061	0,56370	--	--	1,55563	3,56808
1,39768	1,18142	--	--	1,64721	1,44261
1,39768	3,49699	--	--	1,64721	3,78306
1,27061	3,15945	--	--	1,55781	6,05873
1,37689	2,80384	--	--	1,41641	4,32047
1,37689	3,80308	--	--	1,41641	3,02994
1,14740	2,61741	--	--	1,55821	5,98462
1,26214	3,10957	--	--	1,44110	6,22420
1,31049	0,50917	--	--	1,49729	3,54816
1,07222	1,66942	--	--	1,50787	5,36152
1,19135	3,07173	--	--	1,48617	1,09656
1,07222	2,27875	--	--	1,57080	8,45072
1,33840	4,20589	--	--	1,42897	3,01526
1,09506	2,17853	--	--	1,48014	3,65795
1,09506	2,18742	--	--	1,65347	10,39484
1,33472	3,06123	--	--	1,49758	1,12202
1,33472	4,40165	--	--	1,44011	3,89227
1,07238	1,94543	--	--	1,44011	5,46491
1,13826	0,32636	--	--	1,44011	2,81109
1,03478	2,24620	--	--	1,58800	7,64187
1,34521	2,19880	--	--	1,58900	3,98865
1,34521	5,22170	--	--	1,58900	6,87698
1,34521	4,85705	--	--	1,48338	2,97518
1,22241	3,92027	--	--	1,65851	1,33254
1,00015	1,49043	--	--	1,53884	7,53269
1,30605	2,13204	--	--	1,51931	4,17964
1,30605	3,37308	--	--	1,60422	4,80846
1,30605	2,73241	--	--	1,60822	6,92219
1,19721	2,29115	--	--	1,60970	4,58739
1,08837	1,74806	--	--	1,50909	9,37698
1,19721	0,76796	--	--	1,68763	4,08236
1,30605	3,07396	--	--	1,62292	7,49150
1,39722	2,78863	--	--	1,46272	2,64899
1,39722	3,71817	--	--	1,46272	2,88210
1,09349	2,49572	--	--	1,62608	3,37474
1,12917	1,72883	--	--	1,55805	4,06798
1,12917	1,26738	--	--	1,40949	0,91015
1,25463	2,78823	--	--	1,64625	5,23669
1,25463	3,45116	--	--	1,64625	1,39981
1,12917	1,81332	--	--	1,58068	6,39710
1,38009	4,32208	--	--	1,52320	3,29795
1,12917	2,78173	--	--	1,65130	1,16324
1,00370	1,09189	--	--	1,65130	4,53442
1,12917	1,55985	--	--	1,58412	5,22902
1,00370	0,68893	--	--	1,58666	7,55547
1,00370	0,68893	--	--	1,57386	3,27345
1,00370	0,99440	--	--	1,48014	2,27189
1,00370	0,72143	--	--	1,57683	11,36883
1,08999	1,78305	--	--	1,59229	5,77939
1,33221	3,68302	--	--	1,59229	1,10273
1,08999	1,78890	--	--	1,59229	3,98579
1,08706	1,60841	--	--	1,67217	5,49981
1,39764	3,20450	--	--	1,60970	7,91175
1,39764	3,23531	--	--	1,60471	3,65782
1,08706	1,42354	--	--	1,47840	5,64457
1,24235	2,12606	--	--	1,62386	9,86027
1,08706	1,58992	--	--	1,60920	7,00621
1,24235	2,16920	--	--	1,58366	4,28896
1,34859	1,50092	--	--	1,62292	8,91297
1,34859	4,33902	--	--	1,63991	13,56704
1,34859	3,20196	--	--	1,51038	4,05289
1,10339	1,81930	--	--	1,51174	1,31021
1,22599	2,27412	--	--	1,43575	3,22446
1,22599	3,11100	--	--	1,46272	5,73594
1,22599	0,51547	--	--	1,71087	7,32480
1,00495	1,31955	--	--	1,65013	7,39011
1,22828	0,41007	--	--	1,58900	9,85700
1,29380	3,95192	--	--	1,72813	5,42559
1,05857	1,70286	--	--	1,69000	13,24228

1,17619	3,46998	--	--	1,66516	1,47986
1,29380	3,98405	--	--	1,68225	1,21421
1,22675	2,53798	--	--	1,71240	3,70438
1,00370	1,88066	--	--	1,58366	2,73166
1,33827	3,03553	--	--	1,60422	1,33258
1,33827	2,68405	--	--	1,42881	3,03733
1,22792	2,22979	--	--	1,62524	3,28474
1,21803	1,92326	--	--	1,69918	1,50599
1,02075	2,30756	--	--	1,61521	2,56816
1,18379	1,74816	--	--	1,74830	0,93177
1,05143	0,89877	--	--	1,48338	3,66417
1,23200	3,60497	--	--	1,73489	6,57847
1,13723	2,26886	--	--	1,42875	6,65145
1,29777	2,68471	--	--	1,76362	16,60834
1,23321	3,97185	--	--	1,72201	3,41346
1,02767	0,30360	--	--	1,71087	8,86511
1,33401	2,83511	--	--	1,54432	3,39246
1,33401	4,13821	--	--	1,73489	4,69890
1,09146	2,07791	--	--	1,74720	7,70986
1,33713	0,61368	--	--	1,74873	6,46770
1,33713	0,60975	--	--	1,72201	6,15408
1,36624	3,55743	--	--	1,79748	1,57795
1,06263	0,92102	--	--	1,69529	5,73114
1,29259	0,95584	--	--	1,78601	8,72763
1,27941	0,54103	--	--	1,76494	6,09583
1,02353	1,56796	--	--	1,56850	4,66951
1,27941	2,82233	--	--	1,43370	2,48352
1,02353	1,30951	--	--	1,42046	1,53929
1,15147	1,87811	--	--	1,42573	4,06298
1,02353	1,68857	--	--	1,47085	0,66482
1,12150	2,61120	--	--	1,44011	4,36407
1,12150	1,00640	--	--	1,45659	3,05644
1,13929	2,96864	--	--	1,42638	2,55620
1,36715	2,06831	--	--	1,50676	3,51245
1,36715	4,61355	--	--	1,50676	4,88591
1,13929	3,56237	--	--	1,46492	2,08706
1,02536	1,70332	--	--	1,43370	1,60797
1,25322	0,40636	--	--	1,57008	2,44036
1,35102	3,35082	--	--	1,40392	2,82227
1,35102	2,12199	--	--	1,48794	0,77788
1,26422	3,16164	--	--	1,44011	4,57539
1,08387	0,35618	--	--	1,44242	3,53083
1,10831	2,45016	--	--	1,49632	1,44963
1,01595	0,22816	--	--	1,55563	3,74153
1,08659	1,70174	--	--	1,40949	1,66861
1,06585	1,15561	--	--	1,40129	2,91820
1,17243	0,71727	--	--	1,59810	3,34240
1,06585	2,10400	--	--	1,44110	3,31159
1,30064	1,20055	--	--	1,50676	0,87248
1,30064	1,18797	--	--	1,46272	5,38980
1,03823	1,61877	--	--	1,62742	2,88948
1,22700	0,83429	--	--	1,44011	3,36642
1,13262	2,19156	--	--	1,44011	4,01022
1,22700	1,93699	--	--	1,63235	4,32405
1,32138	2,24690	--	--	1,44242	4,02959
1,33075	2,08627	--	--	1,48247	1,76840
1,02365	1,90624	--	--	1,45883	3,85706
1,02365	1,52499	--	--	1,60336	2,07814
1,34344	4,66175	--	--	1,40949	3,69749
1,13676	2,95105	--	--	1,67217	3,18791
1,23376	0,41558	--	--	1,67291	2,39412
1,12160	0,38772	--	--	1,53521	4,26742
1,23376	2,71406	--	--	1,45444	3,06197
1,18484	1,82282	--	--	1,45659	1,92555
1,30332	0,46528	--	--	1,51931	3,11098
1,30332	1,76260	--	--	1,49847	2,46963
1,06635	1,05099	--	--	1,60456	3,54046
1,17303	0,67846	--	--	1,47085	3,14708
1,27967	2,80763	--	--	1,46149	4,13787
1,04246	1,13443	--	--	1,50676	0,94003
1,08227	2,02299	--	--	1,64721	2,68345
1,39096	0,81337	--	--	1,56830	3,81500
1,39096	0,86501	--	--	1,57008	4,95728
1,19226	1,98824	--	--	1,41513	4,58964
1,19604	3,16290	--	--	1,49180	5,72560
1,06314	1,05430	--	--	1,41089	2,00049
1,19604	2,23990	--	--	1,41089	3,40725
1,30949	3,27295	--	--	1,44011	2,71280
1,07140	1,81553	--	--	1,44011	3,39100
1,30949	5,37164	--	--	1,58412	4,65893
1,19045	2,44292	--	--	1,44011	3,10596
1,30949	2,99812	--	--	1,58666	0,88394
1,35755	1,36512	--	--	1,40781	3,20990

1,24442	2,70642	--	--	1,40781	6,56191
1,01816	1,39371	--	--	1,64195	4,60311
1,13129	0,40501	--	--	1,46272	1,93553
1,13129	2,24899	--	--	1,50315	4,49077
1,00674	1,54771	--	--	1,63327	1,08971
1,34232	3,71036	--	--	1,67301	2,85561
1,34232	3,42017	--	--	1,54524	3,33273
1,34232	3,44550	--	--	1,49808	3,16948
1,05813	2,21068	--	--	1,41005	3,62492
1,26976	4,97111	--	--	1,44110	1,65865
1,16394	2,57328	--	--	1,51038	5,03843
1,37557	2,19899	--	--	1,71119	4,98664
1,31299	1,36304	--	--	1,71119	4,21232
1,11100	1,65803	--	--	1,58900	2,02871
1,01090	0,23372	--	--	1,53521	3,00598
1,08586	2,14159	--	--	1,43856	2,68903
1,06989	2,48908	--	--	1,59810	2,16867
1,11404	2,31268	--	--	1,55524	3,73565
1,11404	0,63928	--	--	1,41566	6,12376
1,30795	4,12931	--	--	1,51402	5,03228
1,20734	0,97032	--	--	1,63048	4,15891
1,20734	0,96529	--	--	1,57750	3,95325
1,36846	4,89612	--	--	1,45548	2,78502
1,07522	0,58090	--	--	1,55805	6,48071
1,14901	0,83205	--	--	1,51402	3,05511
1,28047	3,76129	--	--	1,50909	3,37984
1,37897	4,08836	--	--	1,56830	2,44637
1,37897	4,31637	--	--	1,65743	3,58000
1,37316	3,76362	--	--	1,49180	0,68543
1,12501	2,74126	--	--	1,42897	5,05583
1,01251	1,56041	--	--	1,48451	4,96267
1,35001	2,94275	--	--	1,48451	5,76330
1,35001	4,30401	--	--	1,48451	2,66358
1,23751	2,43668	--	--	1,42800	2,77197
1,35001	2,29610	--	--	1,42315	4,61936
1,01251	1,91185	--	--	1,44011	2,73246
1,30999	3,57683	--	--	1,44011	1,62178
1,07181	1,41739	--	--	1,42854	4,69706
1,19090	3,17662	--	--	1,44242	0,71110
1,07181	1,51744	--	--	1,58666	4,79995
1,11850	1,57849	--	--	1,64721	1,40226
1,11850	2,11365	--	--	1,48972	5,46737
1,25831	2,04619	--	--	1,48338	3,16309
1,39813	4,85689	--	--	1,49847	3,29872
1,25831	3,05355	--	--	1,69192	1,03587
1,20396	1,48070	--	--	1,58366	2,73166
1,20396	1,54801	--	--	1,45883	3,55054
1,39409	0,71779	--	--	1,63327	3,39817
1,39409	2,07312	--	--	1,58666	4,99044
1,39409	3,27687	--	--	1,79800	4,88644
1,12057	1,08003	--	--	1,46291	0,80881
1,29246	2,03004	--	--	1,45659	4,91704
1,29246	1,88504	--	--	1,45248	0,53399
1,29919	2,50893	--	--	1,52320	5,35076
1,06135	0,57379	--	--	1,56744	4,64170
1,22122	0,46453	--	--	1,58328	4,39946
1,24734	1,68905	--	--	1,40071	3,63877
1,36073	2,46160	--	--	1,44670	7,33717
1,16427	1,77402	--	--	1,45086	6,89707
1,29364	2,09463	--	--	1,45860	5,91271
1,29364	0,56997	--	--	1,65918	2,06282
1,03491	0,97251	--	--	1,51611	3,91207
1,36995	3,84831	--	--	1,47556	5,43337
1,28202	0,58596	--	--	1,74720	3,00405
1,28202	3,13089	--	--	1,58124	6,77119
1,02562	1,58105	--	--	1,54378	4,54059
1,02562	0,92574	--	--	1,55805	4,62908
1,30330	1,90877	--	--	1,55805	6,48071
1,16607	1,54606	--	--	1,48247	6,00634
1,33875	2,76206	--	--	1,48247	5,28968
1,04125	1,26730	--	--	1,60600	6,75714
1,22599	2,69460	--	--	1,42212	4,25617
1,37924	4,12184	--	--	1,48451	1,74768
1,07274	1,59899	--	--	1,48451	5,55146
1,20532	2,34378	--	--	1,56830	1,53554
1,20532	1,37770	--	--	1,56830	4,84028
1,09384	0,74028	--	--	1,42735	1,54078
1,09384	0,74776	--	--	1,71282	2,64133
1,38838	2,19279	--	--	1,71282	5,92864
1,23411	2,77874	--	--	1,78601	7,12459
1,23411	2,17467	--	--	1,42897	4,43646
1,38838	2,92372	--	--	1,49729	5,35336
1,23411	2,27132	--	--	1,48972	2,89711

1,28316	3,40489	--	--	1,65187	4,60648
1,14058	1,65953	--	--	1,68812	4,43295
1,14058	1,57369	--	--	1,51931	3,13473
1,14058	1,28756	--	--	1,49808	3,34236
1,01423	0,38349	--	--	1,61521	3,33860
1,27807	1,84818	--	--	1,64195	1,57652
1,25789	1,13720	--	--	1,62777	5,20400
1,05689	1,33103	--	--	1,58412	7,37173
1,38016	3,06705	--	--	1,58412	4,05445
1,38016	4,14009	--	--	1,49847	5,60202
1,38016	2,10384	--	--	1,44416	3,46495
1,03512	0,53230	--	--	1,50085	6,96987
1,20764	1,57155	--	--	1,45086	7,59988
1,03512	0,73508	--	--	1,45444	2,46479
1,14631	0,91009	--	--	1,45567	4,24040
1,13262	1,84913	--	--	1,63048	7,13253
1,30087	3,23319	--	--	1,45883	3,98478
1,18261	1,63292	--	--	1,70507	4,18246
1,13322	2,42880	--	--	1,40781	4,50975
1,03020	1,91066	--	--	1,62524	7,96815
1,23624	0,98771	--	--	1,46291	7,04743
1,18451	1,92069	--	--	1,79660	7,18348
1,36554	1,78399	--	--	1,60970	4,57547
1,36554	1,71852	--	--	1,47556	5,67962
1,36554	2,23408	--	--	1,71119	4,33621
1,30160	0,99777	--	--	1,55563	3,61764
1,18327	1,88105	--	--	1,53884	3,14408
1,34911	2,55000	--	--	1,66516	5,69015
1,22647	1,78500	--	--	1,74388	9,49445
1,22647	2,47714	--	--	1,42315	5,35220
1,10382	1,94893	--	--	1,48320	4,40421
1,19082	1,45298	--	--	1,60822	5,42061
1,30465	3,74175	--	--	1,58691	7,01256
1,04372	1,90011	--	--	1,56610	4,67717
1,07912	2,01932	--	--	1,62566	4,27112
1,28000	2,26459	--	--	1,41372	2,48724
1,12000	1,34797	--	--	1,42800	3,20037
1,20061	1,95122	--	--	1,42800	5,57274
1,35052	3,54083	--	--	1,58090	7,89260
1,24367	6,40085	--	--	1,57296	8,35233
1,27577	5,52859	--	--	1,57296	8,50202
1,35205	6,78379	--	--	1,57296	8,94789
1,44863	8,07771	--	--	1,49758	4,13175
1,25548	4,81254	--	--	1,73525	3,06183
1,35052	3,54083	--	--	1,57187	5,95369
1,24367	6,40085	--	--	1,57187	5,64640
1,27577	5,52859	--	--	1,40071	2,61042
1,35205	6,78379	--	--	1,62777	1,96725
1,44863	8,07771	--	--	1,61688	4,71528
1,25548	4,81254	--	--	1,69918	8,10578
1,22004	0,99607	--	--	1,51174	4,13049
1,29530	6,71423	--	--	1,51262	6,31437
1,45730	3,80146	--	--	1,45860	6,94465
1,56940	9,13279	--	--	1,58068	5,88939
1,34520	4,23261	--	--	1,42597	2,76766
1,23310	4,73097	--	--	1,51611	7,30587
1,36672	3,04882	--	--	1,59031	7,05581
1,24247	4,00513	--	--	1,63625	7,53942
1,20414	2,08286	--	--	1,45444	2,69301
1,36672	5,83253	--	--	1,58666	4,31338
1,36672	3,88835	--	--	1,58900	5,28763
1,36672	5,94615	--	--	1,58543	3,49214
1,24247	3,55065	--	--	1,60920	7,57289
1,24247	1,05415	--	--	1,73827	2,95825
1,36672	3,25713	--	--	1,73827	4,64981
1,54447	5,16497	--	--	1,53811	6,41878
1,26366	4,36791	--	--	1,65721	7,71282
1,26366	3,73026	--	--	1,62524	4,32314
1,26366	0,71508	--	--	1,76494	6,20185
1,54447	3,09716	--	--	1,46347	2,33473
1,54447	4,97368	--	--	1,54631	5,63330
1,26366	4,01720	--	--	1,54631	5,20767
1,40406	0,71053	--	--	1,48891	2,90733
1,54447	3,00607	--	--	1,68069	4,13883
1,40406	4,15384	--	--	1,60805	9,85675
1,26366	3,07439	--	--	1,55524	6,53739
1,26366	2,89676	--	--	1,55563	4,64594
1,26366	0,64221	--	--	1,46419	3,63174
1,26366	0,61488	--	--	1,46419	2,07816
1,42897	5,64640	--	--	1,55781	5,61594
1,28607	4,36924	--	--	1,69969	4,16149
1,28607	0,72981	--	--	1,69969	3,36660
1,28607	2,70797	--	--	1,55821	6,26799

1,28607	2,43909	--	--	1,76303	4,75287
1,39409	1,39100	--	--	1,76303	8,81620
1,39409	3,45520	--	--	1,68128	5,25808
1,25469	3,66474	--	--	1,63341	6,01319
1,39409	4,77932	--	--	1,62386	7,85740
1,39409	2,71066	--	--	1,65130	4,03059
1,28780	1,77122	--	--	1,57080	8,78540
1,28780	2,77631	--	--	1,71477	6,61148
1,36943	1,14932	--	--	1,66516	5,62762
1,24493	2,80029	--	--	1,50315	6,08601
1,49392	7,95320	--	--	1,66398	5,26893
1,28381	1,89401	--	--	1,72813	6,91960
1,28381	4,25547	--	--	1,72813	9,49479
1,28381	5,16822	--	--	1,72813	6,08905
1,27563	0,67469	--	--	1,58800	6,95547
1,27563	4,23086	--	--	1,58900	5,22650
1,55910	5,28037	--	--	1,58900	5,84543
1,41737	6,95772	--	--	1,69529	3,53890
1,22093	0,76624	--	--	1,53093	4,51013
1,37354	2,29871	--	--	1,65721	6,74667
1,22093	1,82493	--	--	1,68812	1,29031
1,37354	3,13513	--	--	1,60422	7,43634
1,28316	3,91991	--	--	1,60822	6,54524
1,41604	3,55525	--	--	1,60970	4,97662
1,41604	1,36216	--	--	1,72467	9,69436
1,46510	2,98722	--	--	1,55781	5,75994
1,46510	2,77600	--	--	1,62292	8,16382
1,25580	1,17678	--	--	1,78777	4,80349
1,24873	1,29052	--	--	1,78777	3,39070
1,54997	4,20049	--	--	1,62608	8,27768
1,35748	2,66411	--	--	1,69969	4,48880
1,35748	2,30409	--	--	1,64625	6,58615
1,30255	1,70459	--	--	1,64625	3,74625
1,46537	3,19611	--	--	1,71240	4,35499
1,46537	3,83534	--	--	1,77706	5,49210
1,42476	3,12311	--	--	1,65130	5,60134
1,24666	1,76605	--	--	1,65130	6,53489
1,24666	0,91091	--	--	1,72813	4,57047
1,58324	3,46504	--	--	1,73091	8,98756
1,40924	2,47042	--	--	1,74873	5,24455
1,50721	3,86237	--	--	1,76233	11,72337
1,31881	2,22279	--	--	1,75152	8,07786
1,32697	1,32261	--	--	1,75152	4,38436
1,32697	0,60363	--	--	1,75152	9,80503
1,26805	0,54017	--	--	1,46315	3,15563
1,39485	3,01957	--	--	1,67217	5,83040
1,29402	4,51920	--	--	1,74384	10,66815
1,29402	2,77804	--	--	1,75060	5,88521
1,29402	2,52371	--	--	1,73985	10,29165
1,48451	3,59583	--	--	1,75549	7,29470
1,29895	2,01871	--	--	1,78162	8,57793
1,48451	1,18810	--	--	1,74776	7,14574
1,56026	2,81256	--	--	1,75704	12,46157
1,56026	3,45007	--	--	1,60081	5,22084
1,45075	2,29105	--	--	1,71087	3,68148
1,40721	2,75119	--	--	1,77706	9,23763
1,26649	3,14094	--	--	1,72813	4,42304
1,54793	3,17304	--	--	1,65347	5,53274
1,54793	2,57236	--	--	1,46333	3,53477
1,25118	1,68532	--	--	1,60627	6,19590
1,25118	2,07033	--	--	1,68763	3,52796
1,25118	3,80165	--	--	1,62321	9,64403
1,55210	4,13713	--	--	1,66852	3,29807
1,41100	6,37903	--	--	1,70071	6,99519
1,31907	2,09811	--	--	1,64255	4,17388
1,31907	2,79748	--	--	1,51915	3,55364
1,31907	1,53343	--	--	1,68112	12,03224
1,31907	2,83893	--	--	1,67217	3,24579
1,46564	0,83406	--	--	1,66852	5,94989
1,24174	1,60958	--	--	1,74944	5,74706
1,35462	6,21346	--	--	1,73270	17,44131
1,26042	1,86862	--	--	1,75345	0,77390
1,36545	4,83171	--	--	1,61688	2,95530
1,29468	5,33121	--	--	1,74464	2,18767
1,23200	4,68338	--	--	1,62608	5,23545
1,32677	4,96629	--	--	1,74533	2,47805
1,27368	5,97981	--	--	1,79800	5,92840
1,28337	1,59417	--	--	1,74533	0,62211
1,42315	3,97435	--	--	1,60081	1,54252
1,42315	4,91305	--	--	1,93356	0,81773
1,42315	5,31378	--	--	1,78619	2,22932
1,30455	3,44737	--	--	1,65130	5,44574
1,50028	2,68387	--	--	1,65130	5,48279

1,35025	4,66760	--	--	1,62321	3,70611
1,50028	2,53384	--	--	1,60081	1,48978
1,50028	3,20064	--	--	1,60422	2,29241
1,35025	3,38956	--	--	1,74012	2,37970
1,35025	0,80016	--	--	1,62608	4,10346
1,35025	2,33380	--	--	1,61298	3,69624
1,20023	2,03374	--	--	1,75848	5,78723
1,33898	1,00299	--	--	1,64721	1,44261
1,50636	1,10328	--	--	1,64721	3,78306
1,52504	5,87056	--	--	1,65347	10,39484
1,21180	1,03026	--	--	1,65851	1,33254
1,50387	2,55208	--	--	1,60422	4,80846
1,35349	2,88787	--	--	1,60822	6,92219
1,20310	1,89727	--	--	1,60970	4,58739
1,50387	5,79814	--	--	1,68763	4,08236
1,20310	4,54448	--	--	1,62292	7,49150
1,50387	4,83551	--	--	1,62608	3,37474
1,42503	5,88602	--	--	1,64625	5,23669
1,30628	3,28471	--	--	1,64625	1,39981
1,32557	7,68233	--	--	1,65130	1,16324
1,32557	5,38047	--	--	1,65130	4,53442
1,41394	8,06730	--	--	1,88119	4,56815
1,36665	8,49472	--	--	1,67217	5,49981
1,36665	9,12741	--	--	1,60970	7,91175
1,43965	5,78968	--	--	1,60471	3,65782
1,25970	1,88794	--	--	1,62386	9,86027
1,52963	5,07407	--	--	1,60920	7,00621
1,43965	4,87029	--	--	1,62292	8,91297
1,34967	3,83342	--	--	1,63991	13,56704
1,22443	5,57647	--	--	1,80091	1,95122
1,22443	4,64980	--	--	1,71087	7,32480
1,32370	8,98098	--	--	1,65013	7,39011
1,23944	5,03311	--	--	1,72813	5,42559
1,40916	7,51155	--	--	1,80379	7,51111
1,32627	6,10109	--	--	1,87398	2,62832
1,37832	7,14455	--	--	1,69000	13,24228
1,47183	4,30186	--	--	1,81745	5,72034
1,25272	5,63577	--	--	1,66516	1,47986
1,26026	6,05092	--	--	1,89375	7,39593
1,23182	3,86814	--	--	1,68225	1,21421
1,33488	4,44669	--	--	1,71240	3,70438
1,27647	6,87902	--	--	1,60422	1,33258
1,32278	4,86055	--	--	1,90688	7,95547
1,32278	6,28873	--	--	1,62524	3,28474
1,32278	7,08263	--	--	1,69918	1,50599
1,42004	8,71170	--	--	1,61521	2,56816
1,23070	5,14605	--	--	1,88968	6,17353
1,42886	7,65483	--	--	1,74830	0,93177
1,23966	1,72077	--	--	1,80379	12,56882
1,33502	6,14255	--	--	1,80379	1,03948
1,33502	4,82700	--	--	1,73489	6,57847
1,29572	5,70082	--	--	1,81072	16,25544
1,37650	3,60402	--	--	1,98835	4,22065
1,28710	1,96951	--	--	1,81745	5,51874
1,28710	2,64361	--	--	1,76362	16,60834
1,28710	4,37758	--	--	1,72201	3,41346
1,49303	4,19295	--	--	1,99633	12,73081
1,49303	6,10085	--	--	1,84412	10,89876
1,24420	4,46868	--	--	1,84542	0,95891
1,24420	2,70022	--	--	1,85017	6,37797
1,36861	2,59880	--	--	1,71087	8,86511
1,28912	4,11737	--	--	1,87260	14,15062
1,28912	2,60861	--	--	1,93925	8,67591
1,36753	1,11294	--	--	1,73489	4,69890
1,36753	2,65587	--	--	1,74720	7,70986
1,24321	0,50272	--	--	1,84542	0,95590
1,36753	2,75073	--	--	1,90278	1,03461
1,38740	2,96107	--	--	1,74873	6,46770
1,21397	3,05548	--	--	1,87418	19,42228
1,37827	1,08547	--	--	1,72201	6,15408
1,37827	2,87775	--	--	1,96071	6,63493
1,20599	1,61558	--	--	1,96071	7,73454
1,51524	4,14613	--	--	1,90178	10,76690
1,51524	2,29294	--	--	1,99045	4,44555
1,34688	0,98942	--	--	1,99720	1,04541
1,58533	1,24109	--	--	1,79748	1,57795
1,40931	1,85516	--	--	1,69529	5,73114
1,20676	2,57041	--	--	1,78601	8,72763
1,22539	3,33436	--	--	1,76494	6,09583
1,42962	6,72478	--	--	1,90721	8,07997
1,22090	2,53559	--	--	1,96461	13,92108
1,33189	5,35465	--	--	1,91075	6,31083
1,34915	5,08938	--	--	1,93726	8,46801

1,35977	6,08601	--	--	1,75649	5,86344
1,35977	5,73011	--	--	1,62742	2,88948
1,36214	3,05578	--	--	1,63235	4,32405
1,36214	3,47758	--	--	1,60336	2,07814
1,49481	5,97104	--	--	1,67217	3,18791
1,32872	4,37273	--	--	1,67291	2,39412
1,49481	5,31513	--	--	1,60456	3,54046
1,49481	4,04101	--	--	1,64721	2,68345
1,32872	2,75934	--	--	1,64195	4,60311
1,43370	3,08125	--	--	1,63327	1,08971
1,43370	7,19800	--	--	1,67301	2,85561
1,31422	4,16726	--	--	1,71119	4,98664
1,31422	5,58161	--	--	1,71119	4,21232
1,40642	4,24384	--	--	1,81560	3,88674
1,27061	3,59151	--	--	1,85584	2,58832
1,37689	4,45681	--	--	1,63048	4,15891
1,31049	4,00660	--	--	1,92696	0,84073
1,46007	2,71204	--	--	1,97552	1,16154
1,33840	4,29481	--	--	1,65743	3,58000
1,21673	3,38783	--	--	1,97555	1,37267
1,21673	3,05883	--	--	1,64721	1,40226
1,33472	2,66273	--	--	1,69192	1,03587
1,33472	4,62128	--	--	1,63327	3,39817
1,22349	4,62128	--	--	1,79800	4,88644
1,44869	9,50079	--	--	1,65918	2,06282
1,44869	4,52887	--	--	1,87604	3,47072
1,55217	6,47789	--	--	1,74720	3,00405
1,44467	7,15405	--	--	1,88968	8,72733
1,22241	3,80059	--	--	1,60600	6,75714
1,30605	1,91990	--	--	1,96071	1,63078
1,30605	3,26488	--	--	1,71282	2,64133
1,50470	5,02565	--	--	1,71282	5,92864
1,25463	0,53945	--	--	1,78601	7,12459
1,25463	1,96281	--	--	1,65187	4,60648
1,38009	4,08160	--	--	1,68812	4,43295
1,25463	5,18649	--	--	1,61521	3,33860
1,50556	4,07185	--	--	1,97415	5,93529
1,25463	2,45351	--	--	1,64195	1,57652
1,21110	0,47061	--	--	1,62777	5,20400
1,33221	2,41150	--	--	1,63048	7,13253
1,21110	2,14843	--	--	1,97555	2,34259
1,45332	4,82301	--	--	1,70507	4,18246
1,21110	3,44626	--	--	1,62524	7,96815
1,39764	1,82410	--	--	1,88213	2,19720
1,55294	4,74512	--	--	1,79660	7,18348
1,39764	4,99162	--	--	1,60970	4,57547
1,24235	2,21850	--	--	1,71119	4,33621
1,24235	0,78264	--	--	1,66516	5,69015
1,24235	1,47900	--	--	1,74388	9,49445
1,55294	0,93670	--	--	1,60822	5,42061
1,55294	3,62354	--	--	1,62566	4,27112
1,59378	1,81930	--	--	1,73525	3,06183
1,59378	3,69317	--	--	1,62777	1,96725
1,59378	4,20258	--	--	1,80379	5,95789
1,47118	3,77807	--	--	1,61688	4,71528
1,22599	1,83143	--	--	1,69918	8,10578
1,22599	0,47605	--	--	1,63625	7,53942
1,47118	4,53611	--	--	1,60920	7,57289
1,45160	3,99988	--	--	1,73827	2,95825
1,22828	1,54864	--	--	1,73827	4,64981
1,52904	9,67097	--	--	1,65721	7,71282
1,29380	5,46469	--	--	1,62524	4,32314
1,29380	1,92777	--	--	1,76494	6,20185
1,41142	5,09520	--	--	1,68069	4,13883
1,33827	3,77958	--	--	1,60805	9,85675
1,33827	3,92565	--	--	1,69969	4,16149
1,22675	4,10824	--	--	1,69969	3,36660
1,44979	5,31332	--	--	1,76303	4,75287
1,21803	3,18332	--	--	1,76303	8,81620
1,21803	4,94552	--	--	1,68128	5,25808
1,21803	5,85369	--	--	1,63341	6,01319
1,32171	3,88053	--	--	1,62386	7,85740
1,32086	7,52846	--	--	1,65130	4,03059
1,41354	5,87177	--	--	1,91826	8,22038
1,51859	8,10368	--	--	1,71477	6,61148
1,32877	3,46095	--	--	1,66516	5,62762
1,42368	8,44556	--	--	1,66398	5,26893
1,23200	2,25206	--	--	1,72813	6,91960
1,39759	6,07007	--	--	1,72813	9,49479
1,29777	7,49100	--	--	1,72813	6,08905
1,29777	2,99083	--	--	1,69529	3,53890
1,29777	6,23049	--	--	1,65721	6,74667
1,23423	4,50050	--	--	1,68812	1,29031

1,33597	5,46486	--	--	1,85693	5,38287
1,23321	3,30392	--	--	1,60422	7,43634
1,33401	3,11686	--	--	1,88968	6,66209
1,33713	2,58060	--	--	1,60822	6,54524
1,33713	5,23202	--	--	1,60970	4,97662
1,20342	2,34064	--	--	1,93726	8,20544
1,33713	3,65848	--	--	1,72467	9,69436
1,20342	2,92678	--	--	1,62292	8,16382
1,21444	2,10683	--	--	1,78777	4,80349
1,51804	1,86506	--	--	1,78777	3,39070
1,38261	0,84713	--	--	1,62608	8,27768
1,38261	2,98287	--	--	1,69969	4,48880
1,22898	1,91500	--	--	1,87932	4,34850
1,34544	1,44719	--	--	1,64625	6,58615
1,56968	3,48809	--	--	1,64625	3,74625
1,34544	1,39152	--	--	1,71240	4,35499
1,29259	1,84761	--	--	1,77706	5,49210
1,40735	2,27441	--	--	1,65130	5,60134
1,27941	1,02004	--	--	1,65130	6,53489
1,40187	0,68000	--	--	1,72813	4,57047
1,40187	3,44534	--	--	1,91826	6,07366
1,40187	3,86241	--	--	1,73091	8,98756
1,40187	0,68907	--	--	1,74873	5,24455
1,40187	3,46801	--	--	1,85017	9,04588
1,26168	0,63013	--	--	1,76233	11,72337
1,22878	0,57793	--	--	1,75152	8,07786
1,36715	3,01487	--	--	1,75152	4,38436
1,36715	4,92502	--	--	1,75152	9,80503
1,36715	3,34823	--	--	1,67217	5,83040
1,25322	2,23378	--	--	1,74384	10,66815
1,34448	6,39843	--	--	1,75060	5,88521
1,34448	5,59863	--	--	1,88160	4,13456
1,21532	1,96911	--	--	1,73985	10,29165
1,30064	4,28676	--	--	1,75549	7,29470
1,20067	5,07663	--	--	1,78162	8,57793
1,30465	8,02917	--	--	1,74776	7,14574
1,27902	1,82307	--	--	1,75704	12,46157
1,27902	4,37936	--	--	1,88798	9,23528
1,31059	5,53058	--	--	1,88968	5,22974
1,20137	1,60344	--	--	1,60081	5,22084
1,31059	3,08683	--	--	1,97415	5,78311
1,20137	1,68275	--	--	1,95029	6,56948
1,23280	4,54958	--	--	1,71087	3,68148
1,24010	3,37782	--	--	1,77706	9,23763
1,45808	7,63140	--	--	1,85384	8,89423
1,23376	1,21192	--	--	1,72813	4,42304
1,23376	1,57875	--	--	1,65347	5,53274
1,23376	3,83079	--	--	1,60627	6,19590
1,30332	3,33362	--	--	1,81072	16,11651
1,32278	2,03730	--	--	1,68763	3,52796
1,56328	7,68280	--	--	1,85017	4,50209
1,44303	6,68990	--	--	1,62321	9,64403
1,58967	7,29452	--	--	1,85047	8,27230
1,48363	2,04002	--	--	1,84412	6,22786
1,23636	1,81611	--	--	1,97958	7,65886
1,32893	0,60632	--	--	1,96071	8,08865
1,46182	5,90871	--	--	1,66852	3,29807
1,30949	4,58047	--	--	1,95029	4,04765
1,42854	5,56318	--	--	1,88798	6,24544
1,30949	5,01630	--	--	1,97415	3,31007
1,35755	2,61588	--	--	1,70071	6,99519
1,35755	3,85950	--	--	1,84542	0,94685
1,24442	5,75590	--	--	1,80379	11,81436
1,34232	3,75182	--	--	1,80379	4,00146
1,34232	4,58786	--	--	1,87946	3,87846
1,34232	3,20597	--	--	1,81072	17,03695
1,34232	4,03050	--	--	1,64255	4,17388
1,26976	4,48570	--	--	1,81745	7,48432
1,37557	4,11725	--	--	1,88119	16,10019
1,26976	2,96317	--	--	1,93726	8,86187
1,26442	4,60267	--	--	1,68112	12,03224
1,22351	5,04816	--	--	1,84412	9,83822
1,30795	5,64093	--	--	1,84542	0,96193
1,20734	2,48027	--	--	1,85017	7,34717
1,30795	6,30122	--	--	1,99602	11,10166
1,27071	3,85573	--	--	1,87260	12,46983
1,36846	7,40104	--	--	1,80997	5,83135
1,28047	3,54744	--	--	1,67217	3,24579
1,28047	6,12311	--	--	1,94255	1,50170
1,28047	4,72678	--	--	1,90278	1,04122
1,39234	6,00102	--	--	1,66852	5,94989
1,27508	4,88308	--	--	1,99132	20,11254
1,36045	6,51757	--	--	1,96071	9,11371

1,23751	1,83922	--	--	1,96071	10,73517
1,35001	3,35511	--	--	1,99045	4,08510
1,23751	3,60815	--	--	1,99720	1,20927
1,23751	3,67844	--	--	1,90688	7,35380
1,42908	3,10159	--	--	1,91658	4,50506
1,30999	4,55789	--	--	1,93428	6,64785
1,30999	3,73524	--	--	1,93356	0,81773
1,30999	1,86762	--	--	1,88119	4,56815
1,25831	0,62510	--	--	1,80091	1,95122
1,39813	2,60833	--	--	1,80379	7,51111
1,25831	2,24856	--	--	2,01208	1,68178
1,39813	1,36713	--	--	1,87398	2,62832
1,39813	2,57235	--	--	1,81745	5,72034
1,39813	0,71954	--	--	1,89375	7,39593
1,53794	4,66801	--	--	1,90688	7,95547
1,50495	0,85253	--	--	1,88968	6,17353
1,50495	0,85253	--	--	1,80379	12,56882
1,20396	0,72913	--	--	1,80379	1,03948
1,35446	2,20423	--	--	1,81072	16,25544
1,39409	5,97415	--	--	1,98835	4,22065
1,44073	5,90640	--	--	1,81745	5,51874
1,28065	3,37509	--	--	2,12680	3,75555
1,44073	1,00578	--	--	1,99633	12,73081
1,28065	2,20731	--	--	1,84412	10,89876
1,56688	3,65403	--	--	1,84542	0,95891
1,34304	1,43947	--	--	1,85017	6,37797
1,47709	3,51114	--	--	1,87260	14,15062
1,29246	1,88504	--	--	1,93925	8,67591
1,29246	2,07147	--	--	2,09021	8,59534
1,29919	0,90913	--	--	1,84542	0,95590
1,29919	2,38912	--	--	1,90278	1,03461
1,43016	1,82731	--	--	2,14525	11,32039
1,22122	2,48146	--	--	1,87418	19,42228
1,29364	1,73127	--	--	1,96071	6,63493
1,29364	0,54859	--	--	1,96071	7,73454
1,27210	4,84894	--	--	1,90178	10,76690
1,53843	4,56284	--	--	1,99045	4,44555
1,33875	0,81237	--	--	1,99720	1,04541
1,48750	5,61076	--	--	2,00293	2,78484
1,53248	7,30206	--	--	2,14525	8,42344
1,22599	2,81896	--	--	2,03519	3,56416
1,37924	3,26905	--	--	1,90721	8,07997
1,22599	2,06092	--	--	1,96461	13,92108
1,54970	1,26850	--	--	1,91075	6,31083
1,54970	4,43554	--	--	1,93726	8,46801
1,37751	2,62100	--	--	2,11847	4,30193
1,20532	1,37770	--	--	2,10307	1,19657
1,37751	1,08368	--	--	1,94011	6,58743
1,20532	1,52892	--	--	1,81560	3,88674
1,31264	1,97066	--	--	1,85584	2,58832
1,25893	1,28762	--	--	1,92696	0,84073
1,31146	2,13785	--	--	1,97552	1,16154
1,50136	4,91152	--	--	1,97555	1,37267
1,35122	4,52172	--	--	1,87604	3,47072
1,38838	0,80342	--	--	1,88968	8,72733
1,23411	2,08406	--	--	1,96071	1,63078
1,54264	4,89301	--	--	1,97415	5,93529
1,23411	3,66069	--	--	1,97555	2,34259
1,28316	2,57513	--	--	1,88213	2,19720
1,28316	0,67239	--	--	1,80379	5,95789
1,42573	2,70865	--	--	1,91826	8,22038
1,28316	4,50647	--	--	2,08817	1,38490
1,37638	7,88058	--	--	1,85693	5,38287
1,25789	1,13720	--	--	1,88968	6,66209
1,58533	1,20512	--	--	1,93726	8,20544
1,58533	4,71255	--	--	2,15362	3,40518
1,40918	2,94085	--	--	1,87932	4,34850
1,58533	1,25008	--	--	1,91826	6,07366
1,55268	3,16844	--	--	1,85017	9,04588
1,20764	1,57155	--	--	1,88160	4,13456
1,55268	1,16599	--	--	1,88798	9,23528
1,55268	5,28073	--	--	1,88968	5,22974
1,20764	2,35732	--	--	2,19807	6,09444
1,55268	1,21668	--	--	1,97415	5,78311
1,38016	1,92641	--	--	1,95029	6,56948
1,20764	1,57155	--	--	1,85384	8,89423
1,28959	0,69709	--	--	1,81072	16,11651
1,28959	2,71090	--	--	1,85017	4,50209
1,43288	2,86581	--	--	1,85047	8,27230
1,27419	2,39079	--	--	1,84412	6,22786
1,41577	3,43210	--	--	1,97958	7,65886
1,27419	5,21118	--	--	1,96071	8,08865
1,31613	2,29582	--	--	2,14321	11,41810

1,53623	1,12932	--	--	1,95029	4,04765
1,53623	3,21610	--	--	1,88798	6,24544
1,53623	2,32410	--	--	1,97415	3,31007
1,36554	2,89694	--	--	1,84542	0,94685
1,22647	1,38429	--	--	2,11912	13,15343
1,34911	2,84143	--	--	1,80379	11,81436
1,22647	2,50446	--	--	1,80379	4,00146
1,22647	4,01625	--	--	1,87946	3,87846
1,21401	0,56137	--	--	1,81072	17,03695
1,34890	2,56858	--	--	2,19807	4,58721
1,28000	1,45581	--	--	1,81745	7,48432
1,40071	4,27159	--	--	1,88119	16,10019
1,40071	1,31839	--	--	1,93726	8,86187
1,20061	1,04153	--	--	1,84412	9,83822
1,38558	3,58764	--	--	1,84542	0,96193
1,24367	4,87706	--	--	1,85017	7,34717
1,42133	7,05028	--	--	1,99602	11,10166
1,24367	5,61992	--	--	1,87260	12,46983
1,24367	3,96694	--	--	1,80997	5,83135
1,54520	4,77252	--	--	2,02404	8,86079
1,38558	3,58764	--	--	2,01600	9,06807
1,24367	4,87706	--	--	1,94255	1,50170
1,42133	7,05028	--	--	1,90278	1,04122
1,24367	5,61992	--	--	2,09848	7,78763
1,24367	3,96694	--	--	1,99132	20,11254
1,54520	4,77252	--	--	2,15251	2,64215
1,25548	1,99201	--	--	1,96071	9,11371
1,25548	1,96088	--	--	1,96071	10,73517
1,23237	3,67552	--	--	2,04807	14,45031
1,49457	7,97569	--	--	1,99045	4,08510
1,34520	4,38096	--	--	1,99720	1,20927
1,45730	4,58957	--	--	2,19692	2,87571
1,56940	7,92049	--	--	2,00293	1,65107
1,56940	4,63593	--	--	1,90688	7,35380
1,56940	4,08889	--	--	2,03519	10,62995
1,45730	2,36433	--	--	1,91658	4,50506
1,49097	3,73686	--	--	2,15980	6,49698
1,24247	3,62955	--	--	2,23336	3,17763
1,36672	2,25979	--	--	2,01208	1,68178
1,24247	0,52076	--	--	2,20624	3,52543
1,36672	2,15879	--	--	2,12680	3,75555
1,36672	3,96410	--	--	2,09021	8,59534
1,32455	0,50276	--	--	2,14525	11,32039
1,44496	3,03379	--	--	2,00293	2,78484
1,44496	2,67180	--	--	2,14525	8,42344
1,20414	2,49943	--	--	2,03519	3,56416
1,20414	3,15445	--	--	2,23601	10,19001
1,49097	8,26275	--	--	2,11847	4,30193
1,49097	5,58004	--	--	2,10307	1,19657
1,24247	2,87839	--	--	2,30999	12,49577
1,24247	3,62955	--	--	2,32219	11,77471
1,36672	5,26443	--	--	2,30999	10,66712
1,24247	2,95414	--	--	2,20020	8,67458
1,36672	1,09833	--	--	2,08817	1,38490
1,40406	5,46558	--	--	2,15362	3,40518
1,54447	6,26264	--	--	2,31980	1,63824
1,54447	1,50303	--	--	2,19807	6,09444
1,54447	7,41497	--	--	2,14321	11,41810
1,40406	4,79604	--	--	2,11912	13,15343
1,54447	1,54858	--	--	2,19807	4,58721
1,40406	4,62297	--	--	2,20617	9,82401
1,26366	3,27935	--	--	2,02404	8,86079
1,26366	1,72166	--	--	2,01600	9,06807
1,57187	6,76032	--	--	2,09848	7,78763
1,28607	3,49539	--	--	2,15251	2,64215
1,28607	3,14489	--	--	2,04807	14,45031
1,28607	2,96724	--	--	2,19692	2,87571
1,39409	2,74633	--	--	2,00293	1,65107
1,39409	3,93224	--	--	2,33103	14,75064
1,39409	3,58449	--	--	2,03519	10,62995
1,53350	3,96790	--	--	2,32181	13,72421
1,39409	3,32145	--	--	2,33103	10,71065
1,53350	6,29961	--	--	2,32181	15,37412
1,24493	1,50492	--	--	2,38844	1,57439
1,24493	1,77796	--	--	2,36776	16,83755
1,28381	3,90085	--	--	2,31106	5,28926
1,28381	5,17225	--	--	2,34739	7,29170
1,28381	3,71749	--	--	2,28420	21,84071
1,49778	5,52889	--	--	2,30540	9,11983
1,28381	2,77251	--	--	2,23336	3,17763
1,27563	3,62645	--	--	2,20624	3,52543
1,27563	3,37344	--	--	2,23601	10,19001
1,55910	1,64924	--	--	2,30999	12,49577

1,27563	4,27303	--	--	2,32219	11,77471
1,41737	3,07358	--	--	2,30999	10,66712
1,55910	0,82930	--	--	2,51999	12,00813
1,52616	2,57947	--	--	2,36278	10,13633
1,52616	6,22347	--	--	2,31980	1,63824
1,52616	0,91246	--	--	2,51629	3,14601
1,52616	3,32231	--	--	2,20617	9,82401
1,37354	2,97136	--	--	2,33103	14,75064
1,22093	2,52682	--	--	2,32181	13,72421
1,42573	0,77731	--	--	2,42679	8,85221
1,28316	0,72008	--	--	2,33103	10,71065
1,56830	4,17266	--	--	2,32181	15,37412
1,56830	2,38914	--	--	2,38844	1,57439
1,42573	2,82310	--	--	2,36776	16,83755
1,28316	3,74824	--	--	2,31106	5,28926
1,21375	1,10335	--	--	2,40351	1,98823
1,41604	1,23957	--	--	2,51999	17,17406
1,25580	0,93539	--	--	2,34739	7,29170
1,46510	2,95704	--	--	2,40735	12,16530
1,55140	1,56006	--	--	2,28420	21,84071
1,55140	3,92416	--	--	2,64218	14,14335
1,46537	4,98594	--	--	2,62236	3,19813
1,42476	1,93335	--	--	2,73862	17,73658
1,24666	1,85899	--	--	2,69623	13,25253
1,58324	4,74064	--	--	2,62197	17,93881
1,58200	2,35264	--	--	2,51999	12,00813
1,20792	1,11437	--	--	2,65393	20,72589
1,20792	1,08752	--	--	2,57908	14,80203
1,50721	3,82936	--	--	2,51629	3,14601
1,32697	1,16882	--	--	2,78099	2,60058
1,32697	1,21496	--	--	2,42679	8,85221
1,59236	4,42921	--	--	2,40351	1,98823
1,52166	3,23765	--	--	2,51999	17,17406
1,26805	1,08034	--	--	2,65393	23,06881
1,39485	4,01603	--	--	2,72999	23,40671
1,43780	0,80700	--	--	2,40735	12,16530
1,58158	3,28669	--	--	2,62197	35,03081
1,43780	0,80211	--	--	2,72999	20,58754
1,58158	1,63356	--	--	2,71980	17,54874
1,58158	3,14975	--	--	2,62236	3,19813
1,43780	4,93004	--	--	2,73862	17,73658
1,29402	3,28669	--	--	2,69623	13,25253
1,48451	5,46734	--	--	2,62197	17,93881
1,29895	2,61802	--	--	2,65393	20,72589
1,48451	3,59583	--	--	2,98567	32,44052
1,29895	2,01871	--	--	2,75042	20,99350
1,40424	2,40005	--	--	2,78099	2,60058
1,24821	2,23130	--	--	2,65393	23,06881
1,24821	2,02504	--	--	2,72999	23,40671
1,45075	2,11018	--	--	2,62197	35,03081
1,45075	3,89378	--	--	2,72999	20,58754
1,40721	4,30103	--	--	2,98567	21,26656
1,26649	2,86124	--	--	2,98567	32,44052
1,26649	3,27392	--	--	2,98567	32,44052
1,40721	4,99800	--	--	2,98567	21,26656
1,25118	1,29305	--	--	2,98567	21,26656
1,25118	3,38275	--	--	--	--
1,55210	6,15715	--	--	--	--
1,41100	4,65947	--	--	--	--
1,31907	3,79214	--	--	--	--
1,31907	3,95274	--	--	--	--
1,31907	4,68319	--	--	--	--
1,24174	2,16584	--	--	--	--
1,24174	0,82846	--	--	--	--
1,58039	7,04429	--	--	--	--
1,36545	5,90522	--	--	--	--
1,26042	4,08999	--	--	--	--
1,39427	4,94925	--	--	--	--
1,49386	2,38929	--	--	--	--
1,39427	6,46085	--	--	--	--
1,23200	2,61900	--	--	--	--
1,32677	6,04470	--	--	--	--
1,56761	6,37599	--	--	--	--
1,55389	9,65590	--	--	--	--
1,55389	11,07714	--	--	--	--
1,30455	1,48215	--	--	--	--
1,30455	4,70994	--	--	--	--
1,30455	4,28176	--	--	--	--
1,50028	5,25104	--	--	--	--
1,35025	5,35106	--	--	--	--
1,50028	5,51221	--	--	--	--
1,20023	2,83390	--	--	--	--
1,35025	3,58405	--	--	--	--

1,20023	1,86704	--	--	--	--
1,33898	3,11697	--	--	--	--
1,33441	2,32543	--	--	--	--
1,52504	2,84979	--	--	--	--
1,52504	4,33168	--	--	--	--
1,35349	2,19949	--	--	--	--
1,35349	3,44194	--	--	--	--
1,50387	7,81853	--	--	--	--
1,35349	3,49231	--	--	--	--
1,35349	4,03519	--	--	--	--
1,30628	4,09211	--	--	--	--
1,54378	5,03453	--	--	--	--
1,21728	2,01989	--	--	--	--
1,31872	2,47677	--	--	--	--
1,41394	7,64485	--	--	--	--
1,32557	6,30144	--	--	--	--
1,32557	7,00778	--	--	--	--
1,28124	5,57017	--	--	--	--
1,45207	8,28553	--	--	--	--
1,53748	8,78697	--	--	--	--
1,34967	5,35096	--	--	--	--
1,25970	2,94519	--	--	--	--
1,43965	5,18554	--	--	--	--
1,34967	5,85801	--	--	--	--
1,25548	2,96430	--	--	--	--
1,31861	5,13926	--	--	--	--
1,41280	5,68646	--	--	--	--
1,22443	4,02561	--	--	--	--
1,41195	7,91575	--	--	--	--
1,30916	5,11163	--	--	--	--
1,23215	5,49189	--	--	--	--
1,39437	5,54178	--	--	--	--
1,40916	7,08513	--	--	--	--
1,32627	6,16669	--	--	--	--
1,47677	7,54810	--	--	--	--
1,24141	4,29811	--	--	--	--
1,23944	3,67693	--	--	--	--
1,23474	2,00080	--	--	--	--
1,25272	5,10505	--	--	--	--
1,26026	5,38512	--	--	--	--
1,31981	4,55075	--	--	--	--
1,39649	3,33157	--	--	--	--
1,29674	2,50848	--	--	--	--
1,33488	2,49414	--	--	--	--
1,33488	2,72217	--	--	--	--
1,57104	7,16409	--	--	--	--
1,32278	4,03889	--	--	--	--
1,32278	4,06110	--	--	--	--
1,51174	6,05139	--	--	--	--
1,41726	2,83555	--	--	--	--
1,51174	6,67180	--	--	--	--
1,23070	2,14861	--	--	--	--
1,42004	5,55650	--	--	--	--
1,52412	7,10013	--	--	--	--
1,42886	4,82161	--	--	--	--
1,33502	6,64052	--	--	--	--
1,23966	3,55283	--	--	--	--
1,51168	7,12395	--	--	--	--
1,37650	2,39096	--	--	--	--
1,37650	3,72123	--	--	--	--
1,39436	2,39996	--	--	--	--
1,39436	3,63445	--	--	--	--
1,39436	3,70958	--	--	--	--
1,39436	2,72888	--	--	--	--
1,49303	4,28486	--	--	--	--
1,49303	4,08202	--	--	--	--
1,49303	5,40361	--	--	--	--
1,36861	3,34675	--	--	--	--
1,24420	2,07271	--	--	--	--
1,24420	0,51976	--	--	--	--
1,54695	4,51571	--	--	--	--
1,28912	3,21493	--	--	--	--
1,28912	1,61804	--	--	--	--
1,28912	2,01638	--	--	--	--
1,28912	2,37947	--	--	--	--
1,41804	4,12442	--	--	--	--
1,49185	4,58138	--	--	--	--
1,36753	4,29999	--	--	--	--
1,36753	1,73580	--	--	--	--
1,24321	2,63690	--	--	--	--
1,36753	3,79411	--	--	--	--
1,24321	2,21955	--	--	--	--
1,38740	0,96986	--	--	--	--

1,37827	2,97872	--	--	--	--
1,55055	3,07970	--	--	--	--
1,37827	3,26481	--	--	--	--
1,37827	3,82858	--	--	--	--
1,27577	3,57366	--	--	--	--
1,27577	3,56743	--	--	--	--
1,32751	3,91082	--	--	--	--
1,22539	2,82273	--	--	--	--
1,22539	2,96815	--	--	--	--
1,53174	8,26142	--	--	--	--
1,32751	3,23273	--	--	--	--
1,22090	0,78745	--	--	--	--
1,22090	0,75595	--	--	--	--
1,33189	3,13180	--	--	--	--
1,55387	5,96661	--	--	--	--
1,25278	3,68892	--	--	--	--
1,24895	1,45915	--	--	--	--
1,35977	4,24627	--	--	--	--
1,46437	4,67560	--	--	--	--
1,46437	7,07837	--	--	--	--
1,36214	1,67786	--	--	--	--
1,36214	1,13732	--	--	--	--
1,48597	5,23044	--	--	--	--
1,23831	3,12139	--	--	--	--
1,49481	5,91073	--	--	--	--
1,32872	2,03558	--	--	--	--
1,32872	2,55579	--	--	--	--
1,32872	2,71411	--	--	--	--
1,31422	1,99804	--	--	--	--
1,55317	5,64896	--	--	--	--
1,43370	5,69105	--	--	--	--
1,31422	3,13176	--	--	--	--
1,40642	2,01331	--	--	--	--
1,27061	0,56370	--	--	--	--
1,39768	1,18142	--	--	--	--
1,39768	3,49699	--	--	--	--
1,52474	4,80668	--	--	--	--
1,27061	3,15945	--	--	--	--
1,37689	2,80384	--	--	--	--
1,37689	3,80308	--	--	--	--
1,49163	4,79734	--	--	--	--
1,26214	3,10957	--	--	--	--
1,49163	3,53214	--	--	--	--
1,31049	0,50917	--	--	--	--
1,42962	2,49021	--	--	--	--
1,33840	4,20589	--	--	--	--
1,44594	3,65898	--	--	--	--
1,33472	3,06123	--	--	--	--
1,33472	4,40165	--	--	--	--
1,55717	4,88166	--	--	--	--
1,44869	8,72228	--	--	--	--
1,34521	2,19880	--	--	--	--
1,34521	5,22170	--	--	--	--
1,34521	4,85705	--	--	--	--
1,44467	6,05655	--	--	--	--
1,22241	3,92027	--	--	--	--
1,30605	2,13204	--	--	--	--
1,30605	3,37308	--	--	--	--
1,30605	2,73241	--	--	--	--
1,41489	4,78171	--	--	--	--
1,30605	3,07396	--	--	--	--
1,39722	2,78863	--	--	--	--
1,39722	3,71817	--	--	--	--
1,25463	2,78823	--	--	--	--
1,25463	3,45116	--	--	--	--
1,38009	4,32208	--	--	--	--
1,45332	6,34299	--	--	--	--
1,33221	3,68302	--	--	--	--
1,55294	3,47564	--	--	--	--
1,39764	3,20450	--	--	--	--
1,39764	3,23531	--	--	--	--
1,55294	4,12887	--	--	--	--
1,24235	2,12606	--	--	--	--
1,24235	2,16920	--	--	--	--
1,59378	4,87572	--	--	--	--
1,59378	4,29354	--	--	--	--
1,34859	1,50092	--	--	--	--
1,34859	4,33902	--	--	--	--
1,34859	3,20196	--	--	--	--
1,22599	2,27412	--	--	--	--
1,22599	3,11100	--	--	--	--
1,22599	0,51547	--	--	--	--
1,45160	4,92082	--	--	--	--

1,22828	0,41007	--	--	--	--
1,29380	3,95192	--	--	--	--
1,29380	3,98405	--	--	--	--
1,22675	2,53798	--	--	--	--
1,56132	2,36224	--	--	--	--
1,33827	3,03553	--	--	--	--
1,33827	2,68405	--	--	--	--
1,56132	6,90641	--	--	--	--
1,22792	2,22979	--	--	--	--
1,21803	1,92326	--	--	--	--
1,40542	5,11741	--	--	--	--
1,40542	5,37186	--	--	--	--
1,42338	4,60856	--	--	--	--
1,48597	8,18391	--	--	--	--
1,48597	4,82147	--	--	--	--
1,41354	5,02419	--	--	--	--
1,41354	4,30937	--	--	--	--
1,43038	4,15496	--	--	--	--
1,58491	4,40787	--	--	--	--
1,23200	3,60497	--	--	--	--
1,49742	5,05839	--	--	--	--
1,49742	6,90986	--	--	--	--
1,29777	2,68471	--	--	--	--
1,49742	6,69868	--	--	--	--
1,42411	5,51156	--	--	--	--
1,54151	6,28459	--	--	--	--
1,23321	3,97185	--	--	--	--
1,57656	4,78975	--	--	--	--
1,33401	2,83511	--	--	--	--
1,33401	4,13821	--	--	--	--
1,33713	0,61368	--	--	--	--
1,47085	4,54359	--	--	--	--
1,47085	2,12428	--	--	--	--
1,33713	0,60975	--	--	--	--
1,51804	3,56894	--	--	--	--
1,36624	3,55743	--	--	--	--
1,53623	0,96048	--	--	--	--
1,56968	4,73118	--	--	--	--
1,29259	0,95584	--	--	--	--
1,27941	0,54103	--	--	--	--
1,27941	2,82233	--	--	--	--
1,40187	3,55414	--	--	--	--
1,40187	0,71173	--	--	--	--
1,50185	2,76400	--	--	--	--
1,50185	2,14838	--	--	--	--
1,36715	2,06831	--	--	--	--
1,36715	4,61355	--	--	--	--
1,25322	0,40636	--	--	--	--
1,35102	3,35082	--	--	--	--
1,35102	2,12199	--	--	--	--
1,26422	3,16164	--	--	--	--
1,45744	3,01697	--	--	--	--
1,52374	5,08794	--	--	--	--
1,51742	3,43612	--	--	--	--
1,47774	6,23170	--	--	--	--
1,49219	5,35564	--	--	--	--
1,30064	1,20055	--	--	--	--
1,40903	2,66928	--	--	--	--
1,30064	1,18797	--	--	--	--
1,52902	5,74065	--	--	--	--
1,43827	3,25964	--	--	--	--
1,22700	0,83429	--	--	--	--
1,22700	1,93699	--	--	--	--
1,32138	2,24690	--	--	--	--
1,33075	2,08627	--	--	--	--
1,43311	6,78303	--	--	--	--
1,34344	4,66175	--	--	--	--
1,57024	7,20653	--	--	--	--
1,23376	0,41558	--	--	--	--
1,23376	2,71406	--	--	--	--
1,57024	4,13726	--	--	--	--
1,42180	2,65485	--	--	--	--
1,30332	0,46528	--	--	--	--
1,30332	1,76260	--	--	--	--
1,27967	2,80763	--	--	--	--
1,44303	3,96015	--	--	--	--
1,56328	7,77722	--	--	--	--
1,58967	4,44127	--	--	--	--
1,39096	0,81337	--	--	--	--
1,58967	5,87435	--	--	--	--
1,39096	0,86501	--	--	--	--
1,48363	5,52297	--	--	--	--
1,46182	4,04728	--	--	--	--

1,30949	3,27295	--	--	--	--
1,30949	5,37164	--	--	--	--
1,30949	2,99812	--	--	--	--
1,35755	1,36512	--	--	--	--
1,58381	5,48907	--	--	--	--
1,24442	2,70642	--	--	--	--
1,58381	7,29017	--	--	--	--
1,34232	3,71036	--	--	--	--
1,56604	4,74447	--	--	--	--
1,34232	3,42017	--	--	--	--
1,34232	3,44550	--	--	--	--
1,26976	4,97111	--	--	--	--
1,48138	5,86396	--	--	--	--
1,37557	2,19899	--	--	--	--
1,31299	1,36304	--	--	--	--
1,55621	5,37937	--	--	--	--
1,50586	1,72159	--	--	--	--
1,30795	4,12931	--	--	--	--
1,20734	0,97032	--	--	--	--
1,50917	5,85879	--	--	--	--
1,20734	0,96529	--	--	--	--
1,36846	4,89612	--	--	--	--
1,46621	6,51894	--	--	--	--
1,57720	10,44042	--	--	--	--
1,57597	4,45632	--	--	--	--
1,47747	6,90776	--	--	--	--
1,28047	3,76129	--	--	--	--
1,37897	4,08836	--	--	--	--
1,37897	4,31637	--	--	--	--
1,57799	7,11305	--	--	--	--
1,37316	3,76362	--	--	--	--
1,47124	3,24504	--	--	--	--
1,56975	8,15828	--	--	--	--
1,46251	5,41223	--	--	--	--
1,35001	2,94275	--	--	--	--
1,35001	4,30401	--	--	--	--
1,23751	2,43668	--	--	--	--
1,35001	2,29610	--	--	--	--
1,42908	2,72361	--	--	--	--
1,30999	3,57683	--	--	--	--
1,25831	2,04619	--	--	--	--
1,39813	4,85689	--	--	--	--
1,25831	3,05355	--	--	--	--
1,20396	1,48070	--	--	--	--
1,20396	1,54801	--	--	--	--
1,39409	0,71779	--	--	--	--
1,39409	2,07312	--	--	--	--
1,39409	3,27687	--	--	--	--
1,53350	5,49711	--	--	--	--
1,44073	4,17161	--	--	--	--
1,44073	2,51106	--	--	--	--
1,44073	2,69332	--	--	--	--
1,56688	3,43257	--	--	--	--
1,29246	2,03004	--	--	--	--
1,29246	1,88504	--	--	--	--
1,46158	3,69291	--	--	--	--
1,46158	3,87615	--	--	--	--
1,29919	2,50893	--	--	--	--
1,59202	2,44090	--	--	--	--
1,22122	0,46453	--	--	--	--
1,24734	1,68905	--	--	--	--
1,36073	2,46160	--	--	--	--
1,42300	1,22543	--	--	--	--
1,29364	2,09463	--	--	--	--
1,29364	0,56997	--	--	--	--
1,55236	3,08138	--	--	--	--
1,42300	1,27530	--	--	--	--
1,42300	0,59134	--	--	--	--
1,55236	3,74041	--	--	--	--
1,36995	3,84831	--	--	--	--
1,28202	0,58596	--	--	--	--
1,28202	3,13089	--	--	--	--
1,41022	1,30367	--	--	--	--
1,43362	3,43142	--	--	--	--
1,30330	1,90877	--	--	--	--
1,48750	6,14151	--	--	--	--
1,33875	2,76206	--	--	--	--
1,53248	4,68445	--	--	--	--
1,22599	2,69460	--	--	--	--
1,37924	4,12184	--	--	--	--
1,54970	5,69563	--	--	--	--
1,20532	2,34378	--	--	--	--
1,54970	3,17544	--	--	--	--

1,20532	1,37770	--	--	--	--
1,53142	1,75744	--	--	--	--
1,50136	4,09294	--	--	--	--
1,38838	2,19279	--	--	--	--
1,23411	2,77874	--	--	--	--
1,23411	2,17467	--	--	--	--
1,54264	3,31033	--	--	--	--
1,38838	2,92372	--	--	--	--
1,23411	2,27132	--	--	--	--
1,56830	4,84028	--	--	--	--
1,28316	3,40489	--	--	--	--
1,57301	6,69224	--	--	--	--
1,27807	1,84818	--	--	--	--
1,46754	2,97187	--	--	--	--
1,25789	1,13720	--	--	--	--
1,58533	6,47526	--	--	--	--
1,40918	3,27360	--	--	--	--
1,58533	5,89069	--	--	--	--
1,55268	4,42737	--	--	--	--
1,38016	3,06705	--	--	--	--
1,38016	4,14009	--	--	--	--
1,55268	2,33197	--	--	--	--
1,55268	3,95421	--	--	--	--
1,38016	2,10384	--	--	--	--
1,55268	2,99101	--	--	--	--
1,20764	1,57155	--	--	--	--
1,43288	0,79875	--	--	--	--
1,43288	2,86581	--	--	--	--
1,43288	3,46124	--	--	--	--
1,43288	3,48544	--	--	--	--
1,55735	4,80493	--	--	--	--
1,41577	5,79020	--	--	--	--
1,53739	6,40378	--	--	--	--
1,30087	3,23319	--	--	--	--
1,23624	0,98771	--	--	--	--
1,57935	4,18650	--	--	--	--
1,57935	5,10183	--	--	--	--
1,44774	2,38585	--	--	--	--
1,44774	2,35584	--	--	--	--
1,44774	1,33548	--	--	--	--
1,36554	1,78399	--	--	--	--
1,36554	1,71852	--	--	--	--
1,53623	5,25378	--	--	--	--
1,36554	2,23408	--	--	--	--
1,30160	0,99777	--	--	--	--
1,34911	2,55000	--	--	--	--
1,22647	1,78500	--	--	--	--
1,22647	2,47714	--	--	--	--
1,30465	3,74175	--	--	--	--
1,46619	2,26624	--	--	--	--
1,28000	2,26459	--	--	--	--
1,20061	1,95122	--	--	--	--
1,40071	1,21292	--	--	--	--
1,54774	4,49135	--	--	--	--
1,64178	12,99696	--	--	--	--
1,44863	8,07771	--	--	--	--
1,79349	1,53329	--	--	--	--
1,45730	3,80146	--	--	--	--
1,56940	9,13279	--	--	--	--
1,54774	4,49135	--	--	--	--
1,64178	12,99696	--	--	--	--
1,44863	8,07771	--	--	--	--
1,79349	1,53329	--	--	--	--
1,45730	3,80146	--	--	--	--
1,56940	9,13279	--	--	--	--
1,61521	8,61624	--	--	--	--
1,54447	5,16497	--	--	--	--
1,54447	3,09716	--	--	--	--
1,54447	4,97368	--	--	--	--
1,40406	0,71053	--	--	--	--
1,54447	3,00607	--	--	--	--
1,40406	4,15384	--	--	--	--
1,71477	5,32951	--	--	--	--
1,42897	5,64640	--	--	--	--
1,49392	7,95320	--	--	--	--
1,55910	5,28037	--	--	--	--
1,41737	6,95772	--	--	--	--
1,67877	4,21137	--	--	--	--
1,61833	6,53839	--	--	--	--
1,41604	3,55525	--	--	--	--
1,41604	1,36216	--	--	--	--
1,46510	2,98722	--	--	--	--
1,67440	5,20500	--	--	--	--

1,46510	2,77600	--	--	--	--
1,54997	4,20049	--	--	--	--
1,46537	3,19611	--	--	--	--
1,46537	3,83534	--	--	--	--
1,42476	3,12311	--	--	--	--
1,58324	3,46504	--	--	--	--
1,40924	2,47042	--	--	--	--
1,69561	1,49653	--	--	--	--
1,50721	3,86237	--	--	--	--
1,67007	2,81778	--	--	--	--
1,48451	3,59583	--	--	--	--
1,48451	1,18810	--	--	--	--
1,56026	2,81256	--	--	--	--
1,56026	3,45007	--	--	--	--
1,45075	2,29105	--	--	--	--
1,40721	2,75119	--	--	--	--
1,54793	3,17304	--	--	--	--
1,54793	2,57236	--	--	--	--
1,55210	4,13713	--	--	--	--
1,69320	8,69490	--	--	--	--
1,41100	6,37903	--	--	--	--
1,61220	1,76138	--	--	--	--
1,46564	0,83406	--	--	--	--
1,61220	9,16952	--	--	--	--
1,61220	8,66183	--	--	--	--
1,76356	1,43924	--	--	--	--
1,76356	0,93164	--	--	--	--
1,64529	1,16866	--	--	--	--
1,73670	0,80424	--	--	--	--
1,73670	10,78686	--	--	--	--
1,73670	10,00901	--	--	--	--
1,42315	3,97435	--	--	--	--
1,42315	4,91305	--	--	--	--
1,42315	5,31378	--	--	--	--
1,50028	2,68387	--	--	--	--
1,65031	8,67950	--	--	--	--
1,50028	2,53384	--	--	--	--
1,50028	3,20064	--	--	--	--
1,50636	1,10328	--	--	--	--
1,71568	1,61868	--	--	--	--
1,71568	6,38352	--	--	--	--
1,71568	7,46644	--	--	--	--
1,52504	5,87056	--	--	--	--
1,65426	0,96822	--	--	--	--
1,50387	2,55208	--	--	--	--
1,65426	2,88787	--	--	--	--
1,65426	7,70100	--	--	--	--
1,50387	5,79814	--	--	--	--
1,65426	3,78334	--	--	--	--
1,65426	9,17852	--	--	--	--
1,50387	4,83551	--	--	--	--
1,42503	5,88602	--	--	--	--
1,41394	8,06730	--	--	--	--
1,43965	5,78968	--	--	--	--
1,52963	5,07407	--	--	--	--
1,43965	4,87029	--	--	--	--
1,40916	7,51155	--	--	--	--
1,47183	4,30186	--	--	--	--
1,42004	8,71170	--	--	--	--
1,42886	7,65483	--	--	--	--
1,49303	4,19295	--	--	--	--
1,49303	6,10085	--	--	--	--
1,72284	4,19040	--	--	--	--
1,51524	4,14613	--	--	--	--
1,51524	2,29294	--	--	--	--
1,58533	1,24109	--	--	--	--
1,40931	1,85516	--	--	--	--
1,42962	6,72478	--	--	--	--
1,60980	1,32479	--	--	--	--
1,49481	5,97104	--	--	--	--
1,49481	5,31513	--	--	--	--
1,49481	4,04101	--	--	--	--
1,43370	3,08125	--	--	--	--
1,43370	7,19800	--	--	--	--
1,40642	4,24384	--	--	--	--
1,46007	2,71204	--	--	--	--
1,44869	9,50079	--	--	--	--
1,44869	4,52887	--	--	--	--
1,55217	6,47789	--	--	--	--
1,44467	7,15405	--	--	--	--
1,50470	5,02565	--	--	--	--
1,50556	4,07185	--	--	--	--
1,45332	4,82301	--	--	--	--

1,55294	4,74512	--	--	--	--
1,55294	0,93670	--	--	--	--
1,55294	3,62354	--	--	--	--
1,71638	4,03884	--	--	--	--
1,59378	1,81930	--	--	--	--
1,59378	3,69317	--	--	--	--
1,59378	4,20258	--	--	--	--
1,47118	3,77807	--	--	--	--
1,47118	4,53611	--	--	--	--
1,45160	3,99988	--	--	--	--
1,52904	9,67097	--	--	--	--
1,41142	5,09520	--	--	--	--
1,44979	5,31332	--	--	--	--
1,41354	5,87177	--	--	--	--
1,51859	8,10368	--	--	--	--
1,42368	8,44556	--	--	--	--
1,51804	1,86506	--	--	--	--
1,79391	4,60131	--	--	--	--
1,56968	3,48809	--	--	--	--
1,71126	3,05408	--	--	--	--
1,40735	2,27441	--	--	--	--
1,40187	0,68000	--	--	--	--
1,40187	3,44534	--	--	--	--
1,40187	3,86241	--	--	--	--
1,40187	0,68907	--	--	--	--
1,40187	3,46801	--	--	--	--
1,79331	0,86888	--	--	--	--
1,69892	2,14452	--	--	--	--
1,63785	6,00465	--	--	--	--
1,45808	7,63140	--	--	--	--
1,56328	7,68280	--	--	--	--
1,68353	10,49267	--	--	--	--
1,44303	6,68990	--	--	--	--
1,78838	9,60553	--	--	--	--
1,58967	7,29452	--	--	--	--
1,48363	2,04002	--	--	--	--
1,73091	4,77663	--	--	--	--
1,46182	5,90871	--	--	--	--
1,42854	5,56318	--	--	--	--
1,72352	0,86383	--	--	--	--
1,77435	11,15127	--	--	--	--
1,42908	3,10159	--	--	--	--
1,53794	4,66801	--	--	--	--
1,50495	0,85253	--	--	--	--
1,50495	0,85253	--	--	--	--
1,67291	3,94561	--	--	--	--
1,67291	5,00224	--	--	--	--
1,76089	10,53027	--	--	--	--
1,44073	5,90640	--	--	--	--
1,44073	1,00578	--	--	--	--
1,60081	3,88810	--	--	--	--
1,79072	2,36220	--	--	--	--
1,56688	3,65403	--	--	--	--
1,66173	5,46867	--	--	--	--
1,47709	3,51114	--	--	--	--
1,76891	1,53012	--	--	--	--
1,43016	1,82731	--	--	--	--
1,53843	4,56284	--	--	--	--
1,79483	15,31119	--	--	--	--
1,74911	3,43032	--	--	--	--
1,63625	4,38679	--	--	--	--
1,48750	5,61076	--	--	--	--
1,68573	5,68530	--	--	--	--
1,53248	7,30206	--	--	--	--
1,54970	1,26850	--	--	--	--
1,72189	7,71179	--	--	--	--
1,54970	4,43554	--	--	--	--
1,65149	6,27583	--	--	--	--
1,50136	4,91152	--	--	--	--
1,54264	4,89301	--	--	--	--
1,42573	2,70865	--	--	--	--
1,67719	1,98630	--	--	--	--
1,67719	1,81951	--	--	--	--
1,58533	1,20512	--	--	--	--
1,58533	4,71255	--	--	--	--
1,40918	2,94085	--	--	--	--
1,58533	1,25008	--	--	--	--
1,55268	3,16844	--	--	--	--
1,55268	1,16599	--	--	--	--
1,72520	5,20469	--	--	--	--
1,72520	7,50286	--	--	--	--
1,55268	5,28073	--	--	--	--
1,55268	1,21668	--	--	--	--

1,43288	2,86581	--	--	--	--
1,41577	3,43210	--	--	--	--
1,53623	1,12932	--	--	--	--
1,53623	3,21610	--	--	--	--
1,53623	2,32410	--	--	--	--
1,40071	4,27159	--	--	--	--
1,40071	1,31839	--	--	--	--
1,54574	4,72396	--	--	--	--
1,42133	7,05028	--	--	--	--
1,64178	6,69931	--	--	--	--
1,54520	4,77252	--	--	--	--
1,49457	7,97569	--	--	--	--
1,45730	4,58957	--	--	--	--
1,54574	4,72396	--	--	--	--
1,42133	7,05028	--	--	--	--
1,64178	6,69931	--	--	--	--
1,54520	4,77252	--	--	--	--
1,49457	7,97569	--	--	--	--
1,45730	4,58957	--	--	--	--
1,56940	7,92049	--	--	--	--
1,56940	4,63593	--	--	--	--
1,56940	4,08889	--	--	--	--
1,45730	2,36433	--	--	--	--
1,49097	3,73686	--	--	--	--
1,61521	6,66575	--	--	--	--
1,44496	3,03379	--	--	--	--
1,44496	2,67180	--	--	--	--
1,49097	8,26275	--	--	--	--
1,49097	5,58004	--	--	--	--
1,61521	5,62423	--	--	--	--
1,61521	5,31177	--	--	--	--
1,68488	9,65130	--	--	--	--
1,40406	5,46558	--	--	--	--
1,54447	6,26264	--	--	--	--
1,54447	1,50303	--	--	--	--
1,68488	7,13258	--	--	--	--
1,54447	7,41497	--	--	--	--
1,40406	4,79604	--	--	--	--
1,54447	1,54858	--	--	--	--
1,68488	5,64321	--	--	--	--
1,40406	4,62297	--	--	--	--
1,71477	5,74723	--	--	--	--
1,57187	6,76032	--	--	--	--
1,67291	2,54124	--	--	--	--
1,53350	3,96790	--	--	--	--
1,53350	6,29961	--	--	--	--
1,74291	9,15649	--	--	--	--
1,61842	5,80060	--	--	--	--
1,49778	5,52889	--	--	--	--
1,55910	1,64924	--	--	--	--
1,70084	5,93632	--	--	--	--
1,41737	3,07358	--	--	--	--
1,55910	0,82930	--	--	--	--
1,52616	2,57947	--	--	--	--
1,52616	6,22347	--	--	--	--
1,52616	0,91246	--	--	--	--
1,52616	3,32231	--	--	--	--
1,42573	0,77731	--	--	--	--
1,56830	4,17266	--	--	--	--
1,56830	2,38914	--	--	--	--
1,42573	2,82310	--	--	--	--
1,61833	4,90379	--	--	--	--
1,61833	4,53601	--	--	--	--
1,61833	3,07849	--	--	--	--
1,61833	4,45428	--	--	--	--
1,41604	1,23957	--	--	--	--
1,67440	5,29552	--	--	--	--
1,46510	2,95704	--	--	--	--
1,74371	4,84672	--	--	--	--
1,74371	2,80033	--	--	--	--
1,55140	1,56006	--	--	--	--
1,74533	4,39218	--	--	--	--
1,55140	3,92416	--	--	--	--
1,46537	4,98594	--	--	--	--
1,42476	1,93335	--	--	--	--
1,58324	4,74064	--	--	--	--
1,58200	2,35264	--	--	--	--
1,69561	7,92280	--	--	--	--
1,50721	3,82936	--	--	--	--
1,59236	4,42921	--	--	--	--
1,52166	3,23765	--	--	--	--
1,43780	0,80700	--	--	--	--
1,58158	3,28669	--	--	--	--

1,43780	0,80211	--	--	--	--
1,72536	5,25284	--	--	--	--
1,58158	1,63356	--	--	--	--
1,58158	3,14975	--	--	--	--
1,43780	4,93004	--	--	--	--
1,67007	8,39027	--	--	--	--
1,48451	5,46734	--	--	--	--
1,48451	3,59583	--	--	--	--
1,71629	4,15009	--	--	--	--
1,71629	8,66268	--	--	--	--
1,40424	2,40005	--	--	--	--
1,45075	2,11018	--	--	--	--
1,74090	3,57725	--	--	--	--
1,45075	3,89378	--	--	--	--
1,40721	4,30103	--	--	--	--
1,40721	4,99800	--	--	--	--
1,55210	6,15715	--	--	--	--
1,41100	4,65947	--	--	--	--
1,61220	5,11317	--	--	--	--
1,61220	7,40815	--	--	--	--
1,58039	7,04429	--	--	--	--
1,49386	2,38929	--	--	--	--
1,56761	6,37599	--	--	--	--
1,55389	9,65590	--	--	--	--
1,64529	11,27946	--	--	--	--
1,55389	11,07714	--	--	--	--
1,65031	7,50149	--	--	--	--
1,50028	5,25104	--	--	--	--
1,65031	6,80135	--	--	--	--
1,50028	5,51221	--	--	--	--
1,65031	5,00099	--	--	--	--
1,52504	2,84979	--	--	--	--
1,71568	5,97315	--	--	--	--
1,71568	7,66023	--	--	--	--
1,52504	4,33168	--	--	--	--
1,50387	7,81853	--	--	--	--
1,65426	8,67482	--	--	--	--
1,65426	7,63384	--	--	--	--
1,54378	5,03453	--	--	--	--
1,41394	7,64485	--	--	--	--
1,45207	8,28553	--	--	--	--
1,53748	8,78697	--	--	--	--
1,43965	5,18554	--	--	--	--
1,41280	5,68646	--	--	--	--
1,41195	7,91575	--	--	--	--
1,40916	7,08513	--	--	--	--
1,47677	7,54810	--	--	--	--
1,64293	5,21631	--	--	--	--
1,57104	7,16409	--	--	--	--
1,51174	6,05139	--	--	--	--
1,41726	2,83555	--	--	--	--
1,51174	6,67180	--	--	--	--
1,60937	7,87404	--	--	--	--
1,42004	5,55650	--	--	--	--
1,52412	7,10013	--	--	--	--
1,42886	4,82161	--	--	--	--
1,51168	7,12395	--	--	--	--
1,61745	4,39261	--	--	--	--
1,49303	4,28486	--	--	--	--
1,49303	4,08202	--	--	--	--
1,49303	5,40361	--	--	--	--
1,54695	4,51571	--	--	--	--
1,41804	4,12442	--	--	--	--
1,49185	4,58138	--	--	--	--
1,73425	4,09399	--	--	--	--
1,55055	3,07970	--	--	--	--
1,64420	2,13237	--	--	--	--
1,53174	8,26142	--	--	--	--
1,55387	5,96661	--	--	--	--
1,46437	4,67560	--	--	--	--
1,46437	7,07837	--	--	--	--
1,48597	5,23044	--	--	--	--
1,49481	5,91073	--	--	--	--
1,66090	4,07116	--	--	--	--
1,55317	5,64896	--	--	--	--
1,43370	5,69105	--	--	--	--
1,67265	7,33270	--	--	--	--
1,40642	2,01331	--	--	--	--
1,65180	4,27673	--	--	--	--
1,65180	4,94170	--	--	--	--
1,52474	4,80668	--	--	--	--
1,49163	4,79734	--	--	--	--
1,49163	3,53214	--	--	--	--

1,66789	6,18241	--	--	--	--
1,42962	2,49021	--	--	--	--
1,44594	3,65898	--	--	--	--
1,55717	4,88166	--	--	--	--
1,44869	8,72228	--	--	--	--
1,44467	6,05655	--	--	--	--
1,63256	5,32267	--	--	--	--
1,41489	4,78171	--	--	--	--
1,63102	6,97057	--	--	--	--
1,45332	6,34299	--	--	--	--
1,55294	3,47564	--	--	--	--
1,55294	4,12887	--	--	--	--
1,59378	4,87572	--	--	--	--
1,59378	4,29354	--	--	--	--
1,45160	4,92082	--	--	--	--
1,76428	10,42869	--	--	--	--
1,64666	4,41245	--	--	--	--
1,64666	2,33474	--	--	--	--
1,56132	2,36224	--	--	--	--
1,56132	6,90641	--	--	--	--
1,40542	5,11741	--	--	--	--
1,40542	5,37186	--	--	--	--
1,42338	4,60856	--	--	--	--
1,48597	8,18391	--	--	--	--
1,48597	4,82147	--	--	--	--
1,41354	5,02419	--	--	--	--
1,41354	4,30937	--	--	--	--
1,43038	4,15496	--	--	--	--
1,58491	4,40787	--	--	--	--
1,70842	8,92531	--	--	--	--
1,61351	4,18690	--	--	--	--
1,61351	7,98410	--	--	--	--
1,49742	5,05839	--	--	--	--
1,49742	6,90986	--	--	--	--
1,49742	6,69868	--	--	--	--
1,42411	5,51156	--	--	--	--
1,54151	6,28459	--	--	--	--
1,57656	4,78975	--	--	--	--
1,47085	4,54359	--	--	--	--
1,47085	2,12428	--	--	--	--
1,73827	5,17694	--	--	--	--
1,66985	2,88393	--	--	--	--
1,51804	3,56894	--	--	--	--
1,66985	4,80080	--	--	--	--
1,68985	3,22150	--	--	--	--
1,53623	0,96048	--	--	--	--
1,68985	1,02014	--	--	--	--
1,56968	4,73118	--	--	--	--
1,71126	3,20678	--	--	--	--
1,40187	3,55414	--	--	--	--
1,40187	0,71173	--	--	--	--
1,50185	2,76400	--	--	--	--
1,50185	2,14838	--	--	--	--
1,45744	3,01697	--	--	--	--
1,70300	0,76544	--	--	--	--
1,52374	5,08794	--	--	--	--
1,51742	3,43612	--	--	--	--
1,47774	6,23170	--	--	--	--
1,49219	5,35564	--	--	--	--
1,40903	2,66928	--	--	--	--
1,52902	5,74065	--	--	--	--
1,43827	3,25964	--	--	--	--
1,43311	6,78303	--	--	--	--
1,57024	7,20653	--	--	--	--
1,57024	4,13726	--	--	--	--
1,42180	2,65485	--	--	--	--
1,44303	3,96015	--	--	--	--
1,56328	7,77722	--	--	--	--
1,58967	4,44127	--	--	--	--
1,58967	5,87435	--	--	--	--
1,78838	1,79458	--	--	--	--
1,48363	5,52297	--	--	--	--
1,73091	5,12492	--	--	--	--
1,46182	4,04728	--	--	--	--
1,58381	5,48907	--	--	--	--
1,58381	7,29017	--	--	--	--
1,56604	4,74447	--	--	--	--
1,48138	5,86396	--	--	--	--
1,55621	5,37937	--	--	--	--
1,78820	5,11949	--	--	--	--
1,50586	1,72159	--	--	--	--
1,50917	5,85879	--	--	--	--
1,46621	6,51894	--	--	--	--

1,57720	10,44042	--	--	--	--
1,57597	4,45632	--	--	--	--
1,47747	6,90776	--	--	--	--
1,57799	7,11305	--	--	--	--
1,47124	3,24504	--	--	--	--
1,56975	8,15828	--	--	--	--
1,46251	5,41223	--	--	--	--
1,42908	2,72361	--	--	--	--
1,65545	1,90697	--	--	--	--
1,65545	0,97592	--	--	--	--
1,65545	3,88124	--	--	--	--
1,53350	5,49711	--	--	--	--
1,76089	8,68747	--	--	--	--
1,44073	4,17161	--	--	--	--
1,60081	3,01733	--	--	--	--
1,60081	3,88810	--	--	--	--
1,44073	2,51106	--	--	--	--
1,44073	2,69332	--	--	--	--
1,76089	6,35866	--	--	--	--
1,79072	2,21456	--	--	--	--
1,79072	3,69094	--	--	--	--
1,56688	3,43257	--	--	--	--
1,46158	3,69291	--	--	--	--
1,46158	3,87615	--	--	--	--
1,62398	1,05008	--	--	--	--
1,59202	2,44090	--	--	--	--
1,42300	1,22543	--	--	--	--
1,55236	3,08138	--	--	--	--
1,42300	1,27530	--	--	--	--
1,42300	0,59134	--	--	--	--
1,55236	3,74041	--	--	--	--
1,41022	1,30367	--	--	--	--
1,43362	3,43142	--	--	--	--
1,48750	6,14151	--	--	--	--
1,68573	6,77499	--	--	--	--
1,53248	4,68445	--	--	--	--
1,72189	5,71243	--	--	--	--
1,54970	5,69563	--	--	--	--
1,54970	3,17544	--	--	--	--
1,53142	1,75744	--	--	--	--
1,50136	4,09294	--	--	--	--
1,69691	3,89024	--	--	--	--
1,54264	3,31033	--	--	--	--
1,56830	4,84028	--	--	--	--
1,71087	3,79593	--	--	--	--
1,57301	6,69224	--	--	--	--
1,67719	3,18415	--	--	--	--
1,46754	2,97187	--	--	--	--
1,58533	6,47526	--	--	--	--
1,40918	3,27360	--	--	--	--
1,58533	5,89069	--	--	--	--
1,55268	4,42737	--	--	--	--
1,55268	2,33197	--	--	--	--
1,72520	9,12510	--	--	--	--
1,55268	3,95421	--	--	--	--
1,55268	2,99101	--	--	--	--
1,43288	0,79875	--	--	--	--
1,43288	2,86581	--	--	--	--
1,43288	3,46124	--	--	--	--
1,43288	3,48544	--	--	--	--
1,55735	4,80493	--	--	--	--
1,41577	5,79020	--	--	--	--
1,53739	6,40378	--	--	--	--
1,57935	4,18650	--	--	--	--
1,57935	5,10183	--	--	--	--
1,44774	2,38585	--	--	--	--
1,44774	2,35584	--	--	--	--
1,44774	1,33548	--	--	--	--
1,70692	4,55000	--	--	--	--
1,53623	5,25378	--	--	--	--
1,69176	4,86297	--	--	--	--
1,46619	2,26624	--	--	--	--
1,60081	3,08504	--	--	--	--
1,40071	1,21292	--	--	--	--
1,77139	5,48328	--	--	--	--
1,64178	12,99696	--	--	--	--
1,79349	1,53329	--	--	--	--
1,99276	1,10683	--	--	--	--
1,99276	1,10032	--	--	--	--
1,61521	8,61624	--	--	--	--
1,77139	5,48328	--	--	--	--
1,64178	12,99696	--	--	--	--
1,79349	1,53329	--	--	--	--

1,99276	1,10683	--	--	--	--
1,99276	1,10032	--	--	--	--
1,61521	8,61624	--	--	--	--
1,71477	5,32951	--	--	--	--
1,67877	4,21137	--	--	--	--
1,82063	9,33083	--	--	--	--
1,61833	6,53839	--	--	--	--
1,67440	5,20500	--	--	--	--
1,93746	7,27607	--	--	--	--
1,93746	10,55508	--	--	--	--
1,80941	6,05431	--	--	--	--
1,84567	2,77491	--	--	--	--
1,69561	1,49653	--	--	--	--
1,67007	2,81778	--	--	--	--
1,69320	8,69490	--	--	--	--
1,61220	1,76138	--	--	--	--
1,61220	9,16952	--	--	--	--
1,61220	8,66183	--	--	--	--
1,76356	1,43924	--	--	--	--
1,86154	1,50424	--	--	--	--
1,76356	0,93164	--	--	--	--
1,64529	1,16866	--	--	--	--
1,82810	2,55597	--	--	--	--
1,91951	3,70955	--	--	--	--
1,73670	0,80424	--	--	--	--
1,82810	8,86674	--	--	--	--
1,73670	10,78686	--	--	--	--
1,73670	10,00901	--	--	--	--
1,80034	10,39096	--	--	--	--
1,65031	8,67950	--	--	--	--
1,71568	1,61868	--	--	--	--
1,71568	6,38352	--	--	--	--
1,71568	7,46644	--	--	--	--
1,65426	0,96822	--	--	--	--
1,65426	2,88787	--	--	--	--
1,65426	7,70100	--	--	--	--
1,65426	3,78334	--	--	--	--
1,65426	9,17852	--	--	--	--
1,98914	7,05704	--	--	--	--
1,72284	4,19040	--	--	--	--
1,89512	6,68950	--	--	--	--
1,98736	1,86422	--	--	--	--
1,98736	1,18255	--	--	--	--
1,60980	1,32479	--	--	--	--
1,99308	15,01053	--	--	--	--
1,82699	11,19570	--	--	--	--
1,96828	1,30380	--	--	--	--
1,71638	4,03884	--	--	--	--
1,79391	4,60131	--	--	--	--
1,71126	3,05408	--	--	--	--
1,88769	1,36557	--	--	--	--
1,79331	0,86888	--	--	--	--
1,69892	2,14452	--	--	--	--
1,84258	1,61501	--	--	--	--
1,63785	6,00465	--	--	--	--
1,68353	10,49267	--	--	--	--
1,98709	17,08080	--	--	--	--
1,78838	9,60553	--	--	--	--
1,98709	1,97533	--	--	--	--
1,98709	7,74639	--	--	--	--
1,98709	6,15838	--	--	--	--
1,97818	6,21956	--	--	--	--
1,73091	4,77663	--	--	--	--
1,82651	12,47150	--	--	--	--
1,72352	0,86383	--	--	--	--
1,81927	1,36074	--	--	--	--
1,77435	11,15127	--	--	--	--
1,95173	3,94115	--	--	--	--
1,81232	4,54749	--	--	--	--
1,67291	3,94561	--	--	--	--
1,67291	5,00224	--	--	--	--
1,76089	10,53027	--	--	--	--
1,60081	3,88810	--	--	--	--
1,79072	2,36220	--	--	--	--
1,66173	5,46867	--	--	--	--
1,76891	1,53012	--	--	--	--
1,79483	15,31119	--	--	--	--
1,74911	3,43032	--	--	--	--
1,63625	4,38679	--	--	--	--
1,68573	5,68530	--	--	--	--
1,89408	5,51082	--	--	--	--
1,72189	7,71179	--	--	--	--
1,80163	7,97426	--	--	--	--

1,65149	6,27583	--	--	--	--
1,67719	1,98630	--	--	--	--
1,67719	1,81951	--	--	--	--
1,72520	5,20469	--	--	--	--
1,72520	7,50286	--	--	--	--
1,75018	5,70429	--	--	--	--
1,83493	8,18146	--	--	--	--
1,83493	14,37981	--	--	--	--
1,64178	6,69931	--	--	--	--
1,86371	9,23168	--	--	--	--
1,61521	6,66575	--	--	--	--
1,75018	5,70429	--	--	--	--
1,83493	8,18146	--	--	--	--
1,83493	14,37981	--	--	--	--
1,64178	6,69931	--	--	--	--
1,86371	9,23168	--	--	--	--
1,61521	6,66575	--	--	--	--
1,61521	5,62423	--	--	--	--
1,61521	5,31177	--	--	--	--
1,68488	9,65130	--	--	--	--
1,68488	7,13258	--	--	--	--
1,68488	5,64321	--	--	--	--
1,71477	5,74723	--	--	--	--
1,95173	0,98529	--	--	--	--
1,67291	2,54124	--	--	--	--
1,81232	7,06198	--	--	--	--
1,74291	9,15649	--	--	--	--
1,61842	5,80060	--	--	--	--
1,70084	5,93632	--	--	--	--
1,84258	9,89543	--	--	--	--
1,82063	5,27158	--	--	--	--
1,61833	4,90379	--	--	--	--
1,61833	4,53601	--	--	--	--
1,61833	3,07849	--	--	--	--
1,61833	4,45428	--	--	--	--
1,88370	2,02165	--	--	--	--
1,67440	5,29552	--	--	--	--
1,80357	2,31915	--	--	--	--
1,74371	4,84672	--	--	--	--
1,74371	2,80033	--	--	--	--
1,74533	4,39218	--	--	--	--
1,80941	6,39700	--	--	--	--
1,69561	7,92280	--	--	--	--
1,72536	5,25284	--	--	--	--
1,67007	8,39027	--	--	--	--
1,71629	4,15009	--	--	--	--
1,71629	8,66268	--	--	--	--
1,74090	3,57725	--	--	--	--
1,61220	5,11317	--	--	--	--
1,61220	7,40815	--	--	--	--
1,64529	11,27946	--	--	--	--
1,65031	7,50149	--	--	--	--
1,65031	6,80135	--	--	--	--
1,65031	5,00099	--	--	--	--
1,71568	5,97315	--	--	--	--
1,71568	7,66023	--	--	--	--
1,65426	8,67482	--	--	--	--
1,65426	7,63384	--	--	--	--
1,64293	5,21631	--	--	--	--
1,60937	7,87404	--	--	--	--
1,61745	4,39261	--	--	--	--
1,90767	2,91815	--	--	--	--
1,73425	4,09399	--	--	--	--
1,85196	4,09902	--	--	--	--
1,85196	5,02561	--	--	--	--
1,94345	1,94466	--	--	--	--
1,64420	2,13237	--	--	--	--
1,99308	9,49938	--	--	--	--
1,99308	10,92429	--	--	--	--
1,82699	11,02984	--	--	--	--
1,99308	6,74758	--	--	--	--
1,82699	7,10192	--	--	--	--
1,66090	4,07116	--	--	--	--
1,67265	7,33270	--	--	--	--
1,65180	4,27673	--	--	--	--
1,65180	4,94170	--	--	--	--
1,66789	6,18241	--	--	--	--
1,63256	5,32267	--	--	--	--
1,63102	6,97057	--	--	--	--
1,76428	10,42869	--	--	--	--
1,64666	4,41245	--	--	--	--
1,64666	2,33474	--	--	--	--
1,70842	8,92531	--	--	--	--

1,61351	4,18690	--	--	--	--
1,61351	7,98410	--	--	--	--
1,73827	5,17694	--	--	--	--
1,66985	2,88393	--	--	--	--
1,66985	4,80080	--	--	--	--
1,68985	3,22150	--	--	--	--
1,68985	1,02014	--	--	--	--
1,84348	5,33933	--	--	--	--
1,71126	3,20678	--	--	--	--
1,70300	0,76544	--	--	--	--
1,82651	7,84403	--	--	--	--
1,80379	9,43110	--	--	--	--
1,80379	8,36953	--	--	--	--
1,98709	13,47873	--	--	--	--
1,98709	2,00115	--	--	--	--
1,78838	1,79458	--	--	--	--
1,97818	5,82151	--	--	--	--
1,73091	5,12492	--	--	--	--
1,88232	0,87245	--	--	--	--
1,97644	2,30459	--	--	--	--
1,88232	1,30456	--	--	--	--
1,78820	5,11949	--	--	--	--
1,80002	5,28337	--	--	--	--
1,65545	1,90697	--	--	--	--
1,65545	0,97592	--	--	--	--
1,65545	3,88124	--	--	--	--
1,92097	15,18789	--	--	--	--
1,76089	8,68747	--	--	--	--
1,60081	3,01733	--	--	--	--
1,60081	3,88810	--	--	--	--
1,76089	6,35866	--	--	--	--
1,79072	2,21456	--	--	--	--
1,79072	3,69094	--	--	--	--
1,84637	1,58467	--	--	--	--
1,84637	7,45728	--	--	--	--
1,84637	7,27085	--	--	--	--
1,62398	1,05008	--	--	--	--
1,90688	4,59055	--	--	--	--
1,68573	6,77499	--	--	--	--
1,83898	7,40866	--	--	--	--
1,89408	5,47722	--	--	--	--
1,72189	5,71243	--	--	--	--
1,95177	9,52234	--	--	--	--
1,80163	7,84062	--	--	--	--
1,95177	8,95434	--	--	--	--
1,95177	8,37520	--	--	--	--
1,69691	3,89024	--	--	--	--
1,71087	3,79593	--	--	--	--
1,67719	3,18415	--	--	--	--
1,89772	8,00981	--	--	--	--
1,72520	9,12510	--	--	--	--
1,89772	6,97057	--	--	--	--
1,87762	5,56475	--	--	--	--
1,87762	2,78237	--	--	--	--
1,70692	4,55000	--	--	--	--
1,69176	4,86297	--	--	--	--
1,60081	3,08504	--	--	--	--
1,93947	5,54552	--	--	--	--
1,99276	1,10683	--	--	--	--
1,99276	1,10032	--	--	--	--
2,01779	1,40469	--	--	--	--
2,12989	2,23916	--	--	--	--
2,02292	12,25948	--	--	--	--
1,93947	5,54552	--	--	--	--
1,99276	1,10683	--	--	--	--
1,99276	1,10032	--	--	--	--
2,01779	1,40469	--	--	--	--
2,12989	2,23916	--	--	--	--
2,02292	12,25948	--	--	--	--
2,02292	8,22747	--	--	--	--
1,82063	9,33083	--	--	--	--
1,93746	7,27607	--	--	--	--
1,93746	10,55508	--	--	--	--
1,80941	6,05431	--	--	--	--
1,84567	2,77491	--	--	--	--
1,86154	1,50424	--	--	--	--
1,82810	2,55597	--	--	--	--
1,91951	3,70955	--	--	--	--
1,82810	8,86674	--	--	--	--
1,80034	10,39096	--	--	--	--
2,11346	3,56646	--	--	--	--
1,98914	7,05704	--	--	--	--
1,89512	6,68950	--	--	--	--

1,98736	1,86422	--	--	--	--
1,98736	1,18255	--	--	--	--
1,99308	15,01053	--	--	--	--
1,82699	11,19570	--	--	--	--
1,96828	1,30380	--	--	--	--
2,07763	2,04606	--	--	--	--
2,08418	1,69195	--	--	--	--
2,01815	2,50474	--	--	--	--
2,04797	5,93004	--	--	--	--
1,88769	1,36557	--	--	--	--
1,84258	1,61501	--	--	--	--
1,98709	17,08080	--	--	--	--
1,98709	1,97533	--	--	--	--
1,98709	7,74639	--	--	--	--
1,98709	6,15838	--	--	--	--
1,97818	6,21956	--	--	--	--
1,82651	12,47150	--	--	--	--
1,81927	1,36074	--	--	--	--
1,95173	3,94115	--	--	--	--
1,81232	4,54749	--	--	--	--
1,89408	5,51082	--	--	--	--
1,80163	7,97426	--	--	--	--
1,92263	7,47776	--	--	--	--
1,83493	8,18146	--	--	--	--
1,83493	14,37981	--	--	--	--
1,86371	9,23168	--	--	--	--
1,95173	0,98529	--	--	--	--
1,81232	7,06198	--	--	--	--
1,92263	7,47776	--	--	--	--
1,83493	8,18146	--	--	--	--
1,83493	14,37981	--	--	--	--
1,86371	9,23168	--	--	--	--
1,95173	0,98529	--	--	--	--
1,81232	7,06198	--	--	--	--
1,84258	9,89543	--	--	--	--
1,82063	5,27158	--	--	--	--
1,88370	2,02165	--	--	--	--
1,80357	2,31915	--	--	--	--
1,80941	6,39700	--	--	--	--
2,01967	6,01890	--	--	--	--
1,90767	2,91815	--	--	--	--
2,08110	10,57401	--	--	--	--
1,85196	4,09902	--	--	--	--
1,85196	5,02561	--	--	--	--
1,94345	1,94466	--	--	--	--
2,13780	9,90446	--	--	--	--
2,15917	10,39655	--	--	--	--
1,99308	9,49938	--	--	--	--
1,99308	10,92429	--	--	--	--
1,82699	11,02984	--	--	--	--
1,99308	6,74758	--	--	--	--
1,82699	7,10192	--	--	--	--
1,84348	5,33933	--	--	--	--
2,01815	8,68311	--	--	--	--
2,06153	6,50507	--	--	--	--
1,82651	7,84403	--	--	--	--
1,80379	9,43110	--	--	--	--
1,80379	8,36953	--	--	--	--
2,18580	21,38005	--	--	--	--
1,98709	13,47873	--	--	--	--
1,98709	2,00115	--	--	--	--
1,97818	5,82151	--	--	--	--
2,13093	12,37694	--	--	--	--
1,88232	0,87245	--	--	--	--
1,97644	2,30459	--	--	--	--
1,88232	1,30456	--	--	--	--
1,80002	5,28337	--	--	--	--
1,92097	15,18789	--	--	--	--
1,84637	1,58467	--	--	--	--
2,03100	8,13051	--	--	--	--
1,84637	7,45728	--	--	--	--
1,84637	7,27085	--	--	--	--
1,90688	4,59055	--	--	--	--
2,05123	17,84918	--	--	--	--
1,83898	7,40866	--	--	--	--
1,89408	5,47722	--	--	--	--
2,06627	12,85298	--	--	--	--
1,95177	9,52234	--	--	--	--
1,80163	7,84062	--	--	--	--
1,95177	8,95434	--	--	--	--
1,95177	8,37520	--	--	--	--
1,89772	8,00981	--	--	--	--
1,89772	6,97057	--	--	--	--

1,87762	5,56475	--	--	--	--
1,87762	2,78237	--	--	--	--
2,05943	4,43001	--	--	--	--
2,01779	1,40469	--	--	--	--
2,12989	2,23916	--	--	--	--
2,02292	12,25948	--	--	--	--
2,02292	8,22747	--	--	--	--
2,11346	3,56646	--	--	--	--
2,05943	4,43001	--	--	--	--
2,01779	1,40469	--	--	--	--
2,12989	2,23916	--	--	--	--
2,02292	12,25948	--	--	--	--
2,02292	8,22747	--	--	--	--
2,11346	3,56646	--	--	--	--
2,07763	2,04606	--	--	--	--
2,08418	1,69195	--	--	--	--
2,01815	2,50474	--	--	--	--
2,04797	5,93004	--	--	--	--
2,15150	10,32124	--	--	--	--
2,01967	6,01890	--	--	--	--
2,08110	10,57401	--	--	--	--
2,13780	9,90446	--	--	--	--
2,15917	10,39655	--	--	--	--
2,24239	14,24921	--	--	--	--
2,15150	10,32124	--	--	--	--
2,01967	6,01890	--	--	--	--
2,08110	10,57401	--	--	--	--
2,13780	9,90446	--	--	--	--
2,15917	10,39655	--	--	--	--
2,24239	14,24921	--	--	--	--
2,24239	10,83534	--	--	--	--
2,24239	15,25111	--	--	--	--
2,01815	8,68311	--	--	--	--
2,06153	6,50507	--	--	--	--
2,24079	4,70403	--	--	--	--
2,18580	21,38005	--	--	--	--
2,13093	12,37694	--	--	--	--
2,03100	8,13051	--	--	--	--
2,05123	17,84918	--	--	--	--
2,23846	11,29046	--	--	--	--
2,06627	12,85298	--	--	--	--
2,28896	2,38284	--	--	--	--
2,28896	2,39764	--	--	--	--
2,49659	8,26738	--	--	--	--
2,42750	9,97104	--	--	--	--
2,56567	6,56372	--	--	--	--
2,49659	8,26738	--	--	--	--
2,42750	9,97104	--	--	--	--
2,56567	6,56372	--	--	--	--
2,32024	8,68341	--	--	--	--
2,42750	19,83312	--	--	--	--
2,24239	14,24921	--	--	--	--
2,24239	10,83534	--	--	--	--
2,24239	15,25111	--	--	--	--
2,24079	4,70403	--	--	--	--
2,32024	8,68341	--	--	--	--
2,42750	19,83312	--	--	--	--
2,24239	14,24921	--	--	--	--
2,24239	10,83534	--	--	--	--
2,24239	15,25111	--	--	--	--
2,24079	4,70403	--	--	--	--
2,47272	4,05516	--	--	--	--
2,23846	11,29046	--	--	--	--
2,51785	1,83523	--	--	--	--
2,28896	2,38284	--	--	--	--
2,28896	2,39764	--	--	--	--
2,49659	8,26738	--	--	--	--
2,42750	9,97104	--	--	--	--
2,56567	6,56372	--	--	--	--
2,49659	8,26738	--	--	--	--
2,42750	9,97104	--	--	--	--
2,56567	6,56372	--	--	--	--
2,47269	8,57450	--	--	--	--
2,42750	19,83312	--	--	--	--
2,47272	4,05516	--	--	--	--
2,51785	1,83523	--	--	--	--
2,47269	8,57450	--	--	--	--
2,42750	19,83312	--	--	--	--
2,47272	4,05516	--	--	--	--
2,51785	1,83523	--	--	--	--
2,83099	5,20456	--	--	--	--
2,82624	3,37946	--	--	--	--
2,83574	7,02966	--	--	--	--

2,83099	5,20456	--	--	--	--
2,82624	3,37946	--	--	--	--
2,83574	7,02966	--	--	--	--
2,83099	5,20456	--	--	--	--
2,82624	3,37946	--	--	--	--
2,83574	7,02966	--	--	--	--
2,83099	5,20456	--	--	--	--
2,82624	3,37946	--	--	--	--
2,83574	6	--	--	--	--
1,02342	1,32417	--	--	--	--
0,80336	0,68814	--	--	--	--
0,83083	0,73727	--	--	--	--
0,81449	0,17108	--	--	--	--
0,83632	0,34236	--	--	--	--
0,83083	1,00638	--	--	--	--
0,85369	0,48950	--	--	--	--
0,92034	1,10830	--	--	--	--
0,86596	0,59814	--	--	--	--
0,86853	0,27345	--	--	--	--
0,86697	0,27230	--	--	--	--
0,84603	0,82832	--	--	--	--
0,81193	0,35435	--	--	--	--
0,93033	0,94196	--	--	--	--
0,81403	0,81774	--	--	--	--
0,81524	0,58485	--	--	--	--
0,81554	0,83271	--	--	--	--
0,97464	1,27895	--	--	--	--
0,86635	0,75232	--	--	--	--
0,86919	0,61625	--	--	--	--
0,88853	0,43748	--	--	--	--
0,82302	0,24070	--	--	--	--
1,00692	0,44174	--	--	--	--
0,83904	0,75658	--	--	--	--
0,83393	0,67023	--	--	--	--
0,85369	0,57904	--	--	--	--
0,97013	0,77901	--	--	--	--
0,97464	1,33746	--	--	--	--
0,81449	0,62211	--	--	--	--
0,81459	0,32118	--	--	--	--
0,81517	0,80453	--	--	--	--
0,81671	0,26144	--	--	--	--
0,81995	0,23537	--	--	--	--
0,82097	0,53956	--	--	--	--
0,94060	1,04838	--	--	--	--
0,88853	0,84804	--	--	--	--
0,83123	0,80116	--	--	--	--
0,88871	0,79405	--	--	--	--
0,95580	1,10005	--	--	--	--
1,01651	1,31583	--	--	--	--
0,98189	1,41608	--	--	--	--
0,99149	0,83230	--	--	--	--
1,10196	0,61540	--	--	--	--
1,11267	1,09364	--	--	--	--
1,14188	1,13423	--	--	--	--
0,85738	0,34090	--	--	--	--
1,03135	1,42627	--	--	--	--
1,03135	1,54513	--	--	--	--
0,93966	0,80902	--	--	--	--
0,86513	0,15289	--	--	--	--
0,97464	0,78367	--	--	--	--
1,01202	1,35746	--	--	--	--
0,99260	0,71033	--	--	--	--
0,97784	0,82730	--	--	--	--
0,80485	0,50839	--	--	--	--
0,93084	0,93316	--	--	--	--
1,04817	1,62198	--	--	--	--
0,94080	0,39947	--	--	--	--
0,94080	0,81493	--	--	--	--
1,04856	1,51449	--	--	--	--
1,02118	1,25674	--	--	--	--
1,00170	1,12414	--	--	--	--
1,02403	1,04063	--	--	--	--
0,81283	0,53184	--	--	--	--
1,03854	2,04593	--	--	--	--
1,03854	1,38239	--	--	--	--
0,93333	1,44486	--	--	--	--
0,88853	1,17111	--	--	--	--
0,99980	1,51592	--	--	--	--
0,83017	0,65873	--	--	--	--
0,98189	1,79057	--	--	--	--
0,89304	0,79952	--	--	--	--
1,11960	1,92134	--	--	--	--
0,83904	0,61206	--	--	--	--

0,95890	0,44205	--	--	--	--
1,02919	1,31733	--	--	--	--
0,85989	1,24289	--	--	--	--
0,90575	1,07842	--	--	--	--
0,83646	0,63308	--	--	--	--
1,08936	1,64865	--	--	--	--
0,91193	1,16059	--	--	--	--
1,01325	1,18969	--	--	--	--
0,97565	1,02078	--	--	--	--
1,14594	2,02798	--	--	--	--
1,05180	1,92588	--	--	--	--
0,92032	0,80775	--	--	--	--
1,13313	1,20637	--	--	--	--
0,92213	0,69553	--	--	--	--
0,86138	0,71748	--	--	--	--
0,97784	1,13964	--	--	--	--
0,97784	1,24094	--	--	--	--
0,97784	0,77031	--	--	--	--
1,15563	2,41765	--	--	--	--
1,19680	2,43288	--	--	--	--
0,87221	0,83594	--	--	--	--
1,05934	1,46709	--	--	--	--
1,00028	1,18114	--	--	--	--
1,04817	0,92796	--	--	--	--
1,03854	2,24868	--	--	--	--
1,00807	1,26794	--	--	--	--
0,99872	1,20376	--	--	--	--
1,00969	0,94814	--	--	--	--
0,93899	1,01280	--	--	--	--
1,00170	0,78819	--	--	--	--
0,93978	2,10551	--	--	--	--
1,05817	1,34792	--	--	--	--
0,94107	0,65465	--	--	--	--
0,94248	0,51658	--	--	--	--
0,88070	0,77667	--	--	--	--
0,99980	1,87685	--	--	--	--
0,94452	0,50212	--	--	--	--
1,06773	2,09781	--	--	--	--
0,94687	0,60275	--	--	--	--
0,82860	0,22380	--	--	--	--
0,99218	1,62045	--	--	--	--
1,11483	1,96986	--	--	--	--
0,83017	0,35681	--	--	--	--
0,83017	0,45013	--	--	--	--
0,83205	1,06117	--	--	--	--
0,85641	1,12288	--	--	--	--
0,90161	1,72048	--	--	--	--
0,95236	0,64127	--	--	--	--
0,95236	0,94385	--	--	--	--
0,81671	0,28219	--	--	--	--
0,89760	0,80881	--	--	--	--
0,95580	0,89800	--	--	--	--
1,18585	0,99918	--	--	--	--
1,19862	2,35758	--	--	--	--
0,95890	1,66617	--	--	--	--
1,00638	1,79561	--	--	--	--
1,08293	1,52554	--	--	--	--
1,19164	0,38283	--	--	--	--
0,86665	0,72800	--	--	--	--
1,13767	1,73773	--	--	--	--
1,08649	2,21175	--	--	--	--
0,92213	0,87697	--	--	--	--
1,19929	0,40944	--	--	--	--
1,16041	1,76015	--	--	--	--
1,07115	1,22883	--	--	--	--
1,15563	0,39109	--	--	--	--
1,04391	0,96548	--	--	--	--
1,05180	1,24528	--	--	--	--
1,14240	2,37770	--	--	--	--
0,98831	1,28752	--	--	--	--
1,04662	1,48798	--	--	--	--
1,13313	1,00998	--	--	--	--
1,05778	1,36933	--	--	--	--
1,19000	2,58270	--	--	--	--
0,92692	1,14616	--	--	--	--
0,94107	1,09484	--	--	--	--
0,88527	0,30324	--	--	--	--
0,99872	1,20376	--	--	--	--
1,07668	1,06580	--	--	--	--
1,11089	2,36411	--	--	--	--
1,00028	1,12352	--	--	--	--
0,91325	0,64171	--	--	--	--
0,87947	0,77341	--	--	--	--

1,07313	1,72772	--	--	--	--
0,82860	0,16648	--	--	--	--
0,94080	0,36352	--	--	--	--
0,94876	1,11985	--	--	--	--
1,15209	1,63161	--	--	--	--
1,00807	0,98290	--	--	--	--
1,15209	2,10340	--	--	--	--
1,08894	0,84246	--	--	--	--
1,09083	1,84316	--	--	--	--
1,14240	2,52058	--	--	--	--
1,19475	2,70241	--	--	--	--
1,08377	1,22733	--	--	--	--
1,12946	2,25706	--	--	--	--
1,09627	1,82030	--	--	--	--
1,08894	1,44416	--	--	--	--
1,02304	2,19827	--	--	--	--
1,02403	1,25185	--	--	--	--
1,17033	1,09214	--	--	--	--
1,09463	1,83365	--	--	--	--
1,06773	1,65746	--	--	--	--
1,14594	2,62968	--	--	--	--
0,97784	0,27014	--	--	--	--
1,08649	1,56173	--	--	--	--
1,19680	1,44955	--	--	--	--
0,90873	0,96119	--	--	--	--
0,94484	0,76614	--	--	--	--
1,04563	1,77770	--	--	--	--
1,04633	0,69812	--	--	--	--
1,04720	2,01147	--	--	--	--
1,04924	0,67757	--	--	--	--
1,04924	0,63357	--	--	--	--
1,10658	0,37013	--	--	--	--
0,98967	1,00936	--	--	--	--
1,09522	1,94819	--	--	--	--
1,14176	2,71559	--	--	--	--
0,90406	1,24962	--	--	--	--
1,19175	2,68202	--	--	--	--
1,13313	1,55705	--	--	--	--
1,16104	1,40841	--	--	--	--
0,82860	0,90611	--	--	--	--
1,00980	1,33873	--	--	--	--
1,11305	1,32623	--	--	--	--
1,06736	1,20768	--	--	--	--
0,87947	1,10954	--	--	--	--
1,06948	0,71754	--	--	--	--
1,07140	2,01541	--	--	--	--
1,07161	0,74058	--	--	--	--
0,93899	0,65137	--	--	--	--
1,14240	1,86772	--	--	--	--
1,15394	0,98764	--	--	--	--
1,08214	1,56390	--	--	--	--
1,19123	0,36989	--	--	--	--
1,08293	1,69272	--	--	--	--
1,19514	2,88709	--	--	--	--
1,03135	0,99542	--	--	--	--
1,08894	0,87978	--	--	--	--
1,00935	1,08104	--	--	--	--
1,05041	2,68182	--	--	--	--
1,15267	2,02862	--	--	--	--
1,17033	1,80822	--	--	--	--
1,18168	1,12407	--	--	--	--
1,09846	2,09008	--	--	--	--
1,09846	1,80610	--	--	--	--
1,10196	2,91820	--	--	--	--
0,90873	1,18079	--	--	--	--
1,19645	3,59172	--	--	--	--
1,16291	2,08058	--	--	--	--
1,10831	1,73974	--	--	--	--
1,11010	1,54238	--	--	--	--
0,98831	1,34957	--	--	--	--
1,11240	0,77598	--	--	--	--
1,16041	2,18848	--	--	--	--
1,17575	2,24654	--	--	--	--
1,16355	0,98635	--	--	--	--
1,18551	1,89544	--	--	--	--
1,12200	2,11500	--	--	--	--
1,12200	2,10106	--	--	--	--
1,12356	2,81732	--	--	--	--
1,12356	2,62203	--	--	--	--
1,19100	1,98292	--	--	--	--
1,05867	0,99527	--	--	--	--
0,96483	1,82457	--	--	--	--
1,00170	1,12414	--	--	--	--

1,05221	1,30774	--	--	--	--
1,18865	1,72440	--	--	--	--
1,07140	1,94323	--	--	--	--
1,13233	1,78601	--	--	--	--
1,13279	0,86373	--	--	--	--
1,13279	0,75300	--	--	--	--
1,07527	1,85212	--	--	--	--
0,93599	0,59008	--	--	--	--
1,08293	1,77213	--	--	--	--
1,19123	1,42941	--	--	--	--
1,08331	1,89112	--	--	--	--
0,80313	0,63932	--	--	--	--
0,93699	0,56039	--	--	--	--
1,07876	1,66617	--	--	--	--
0,93899	0,62754	--	--	--	--
1,07313	1,42983	--	--	--	--
0,85544	0,32904	--	--	--	--
1,14240	1,61278	--	--	--	--
1,14318	1,92055	--	--	--	--
1,09026	1,71666	--	--	--	--
1,14820	1,76305	--	--	--	--
0,81161	0,27694	--	--	--	--
1,15267	1,95806	--	--	--	--
1,15442	2,10359	--	--	--	--
0,99078	0,48160	--	--	--	--
1,08894	1,51056	--	--	--	--
1,07161	0,80620	--	--	--	--
1,16463	1,46602	--	--	--	--
1,09083	1,55050	--	--	--	--
1,17136	1,38579	--	--	--	--
0,98831	1,12929	--	--	--	--
1,11185	2,38889	--	--	--	--
1,09956	1,43495	--	--	--	--
1,12200	2,74253	--	--	--	--
1,17924	3,63293	--	--	--	--
1,18372	2,75107	--	--	--	--
1,06535	1,62117	--	--	--	--
1,18595	2,76668	--	--	--	--
1,06736	1,59743	--	--	--	--
1,18775	1,11054	--	--	--	--
1,14188	2,87810	--	--	--	--
1,19045	2,93150	--	--	--	--
1,19175	2,24648	--	--	--	--
1,15019	2,50383	--	--	--	--
1,06971	1,22736	--	--	--	--
1,07313	1,62842	--	--	--	--
1,14820	1,96806	--	--	--	--
0,89340	1,29995	--	--	--	--
0,99914	1,22018	--	--	--	--
0,97996	0,46599	--	--	--	--
1,05629	1,38266	--	--	--	--
1,16836	1,87198	--	--	--	--
1,15591	2,63767	--	--	--	--
1,15591	2,02271	--	--	--	--
0,86233	1,26126	--	--	--	--
1,18372	1,96505	--	--	--	--
1,08894	1,30086	--	--	--	--
1,09083	0,90913	--	--	--	--
1,16479	1,27364	--	--	--	--
1,16479	1,97869	--	--	--	--
1,12692	2,13199	--	--	--	--
1,19100	2,17359	--	--	--	--
1,19100	2,37950	--	--	--	--
1,01287	1,28239	--	--	--	--
1,07085	1,64172	--	--	--	--
1,07085	1,31022	--	--	--	--
1,17924	2,67604	--	--	--	--
1,11185	3,18311	--	--	--	--
1,16836	2,62077	--	--	--	--
1,16836	2,46957	--	--	--	--
0,97565	0,45987	--	--	--	--
1,13826	1,61309	--	--	--	--
1,07668	1,47297	--	--	--	--
1,15591	1,57815	--	--	--	--
1,15591	1,73375	--	--	--	--
0,93084	0,69209	--	--	--	--
1,18571	3,11604	--	--	--	--
0,98073	1,00603	--	--	--	--
1,04720	1,72634	--	--	--	--
0,87889	0,93056	--	--	--	--
1,15577	0,34929	--	--	--	--
0,99260	1,07493	--	--	--	--