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CALCULATED PRESSURE-BROADENED
LINEWIDTHS OF NO₂

G. D. T. Tejwani and E. S. Yeung

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Date Transmitted: June 1975

PREPARED FOR THE U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
UNDER CONTRACT W-7405-eng-82

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ABSTRACT

N_2^- , O_2^- , and self-broadened linewidths of nitrogen dioxide for a wide range of quantum numbers N and K_a , for both type A and type B bands, have been calculated using the Anderson-Tsao-Curnutte theory of line broadening. For self-broadened linewidths of NO_2 , dipole-dipole, dipole-quadrupole, quadrupole-dipole, and quadrupole-quadrupole interactions have been taken into account. Dipole-quadrupole and quadrupole-quadrupole interactions were included in foreign-gas (N_2 and O_2) broadened linewidth computations. The molecular quadrupole moment tensor of NO_2 was taken from Rothenberg and Schaefer. Air-broadened linewidths of NO_2 at 200°K have also been calculated.

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I. INTRODUCTION

Nitrogen dioxide plays an important part in atmospheric photochemistry and the production of photochemical smog.¹ Motivated partly by attempts to improve detection and measurement capabilities for NO_2 in the Earth's troposphere and stratosphere as well as in industrial and vehicular effluents, the infrared spectrum of nitrogen dioxide has become the subject of intense interest during recent years.²⁻⁸ The quantitative analysis of atmospheric NO_2 bands requires a precise knowledge of the spectral-line parameters, i.e., line positions, absolute intensities, linewidths and ground state energies. By using rotational and centrifugal distortion constants of the ground and the excited states, available from the successful rotational analysis of several infrared bands^{4-7,9-11} of NO_2 , the line positions, ground state energies and relative intensities can be computed for these bands. Absolute line intensities can be obtained by normalizing individual relative intensities with respect to the total band intensity. Normalization can also be performed if the measurements on the absolute intensities for one or more transitions are available. Band intensity has been measured only for ν_3 and $\nu_1 + \nu_3$ bands.^{8,12} Clearly, the absolute intensity measurements on the rest of the bands are also needed. However, in this report we will be mainly

concerned with the linewidth parameter, for which practically no data on NO_2 exists.

A mean value for $\gamma_{\text{NO}_2\text{-air}}^\circ = 0.07 \text{ cm}^{-1} \text{ atm}^{-1}$ at 290°K for all lines in the ν_3 fundamental was assumed by Lowder et al.¹³ in their work on the sensitivity comparison of a multiple-slit correlation spectrometer with laser absorption in air-pollution detection. The value for the same parameter was taken to be $0.08 \text{ cm}^{-1} \text{ atm}^{-1}$ in Ref. 14 in the determination of stratospheric NO_2 mixing ratio by volume. Average self-broadened linewidth for nitrogen dioxide in the ν_3 band has been estimated⁸ to be $0.08 \text{ cm}^{-1} \text{ atm}^{-1} \pm 50$ percent at 40°C .

Theoretical estimates of self-, N_2 -, and O_2 -broadened linewidths of NO_2 based upon Anderson-Tsao-Curnutte^{15,16} theory of line broadening for a few transitions in a type B band were reported in Ref. 17. Only the dipole moment of the absorbing molecule was taken into account in the linewidth calculations.¹⁷ Because of the relatively low dipole moment of nitrogen dioxide¹⁸ ($\mu_{\text{NO}_2} = 0.316 \times 10^{-18} \text{ esu}\cdot\text{cm}$), the contributions to the linewidth value due to the quadrupole moment¹⁹ of nitrogen dioxide²⁰ ($q_{\text{NO}_2} = 3.672 \times 10^{-26} \text{ esu}\cdot\text{cm}^2$) in the self- as well as foreign-gas-broadening are expected to be much more significant.

We have previously described the computer programs for asymmetric top linewidth calculations.²¹ These programs were utilized for ozone linewidth computations for a wide range of J and K_a quantum numbers.^{21,22} In this work, the same computer

programs have been used in the self- and foreign-gas-broadened linewidth calculations for the transitions in NO_2 bands.

$\gamma_{\text{NO}_2-\text{N}_2}^\circ$ and $\gamma_{\text{NO}_2-\text{O}_2}^\circ$ have been calculated at 300°K for transitions with $N \leq 40$ and $K_a \leq 10$ for both type A and type B bands. (Note: N is the rotational angular momentum quantum number exclusive of spin and would be equal to J for a $^1\Sigma$ state. The J is the total angular momentum quantum number including electron spin but excluding nuclear spin. The K_a is the usual asymmetric rotor quantum number giving the component of N along the limiting prolate symmetric top axis. The component of N along the limiting oblate top axis is called K_c .) Air-broadened linewidths for the same transitions have been computed at 200°K . Self-broadened linewidths of NO_2 at 300°K have been calculated for transitions with $N \leq 10$ and $K_a \leq 5$ for both types of bands. For R-branch transitions only, with $11 \leq N \leq 20$ and $K_a \leq 5$, self-broadened linewidths have also been computed for type B band. The energy level of the lower state for each transition, along with an approximate value for the line position and the relative line intensity have also been calculated for ν_3 fundamental in type A and ν_2 fundamental in type B bands.

II. COMPUTATIONAL PROCEDURE

The line-broadening theory of the asymmetric top molecule developed by Yamamoto and Aoki¹⁹ in the framework of Anderson-Tsao-Curnutte's theory^{15,16} has been used in

our computations. Dipole-dipole ($\mu\mu$), dipole-quadrupole (μq), quadrupole-dipole ($q\mu$), and quadrupole-quadrupole (qq) interactions have been included in NO_2 self-broadening calculations. For N_2 - and O_2 -broadened linewidths of NO_2 , dipole-quadrupole ($\mu\theta$) and quadrupole-quadrupole ($q\theta$) interactions have been taken into account. In the above notation, q and θ refer to quadrupolar interaction for asymmetric top and linear molecules, respectively. Because of the comparatively large value of the quadrupole moment of NO_2 , contributions from short-ranged higher order multipole interactions to the linewidth value should be negligible.

Theoretical details on the linewidth computation are given in Ref. 21. The selection rules²³ for type A bands are $\Delta N = 0, \pm 1$; $N = 0 \leftrightarrow N = 0$; and $\Delta K_a = 0, \pm 2, \dots$; and $\Delta K_c = \pm 1, \pm 3, \dots$. For type B bands, the selection rules²³ are $\Delta N = 0, \pm 1$; $N = 0 \leftrightarrow N = 0$; and ΔK_a and $\Delta K_c = \pm 1, \pm 3, \dots$. The selection rules for the non-radiative dipole transition in asymmetric top molecule are the same as the type B band radiative transition selection rules mentioned above. Non-radiative quadrupole transition selection rules in asymmetric top molecule are $\Delta N = 0, \pm 1, \pm 2$; and ΔK_a and $\Delta K_c = 0, \pm 2, \pm 4, \dots$. Non-radiative transitions appear in the expressions for interruption functions.^{19, 21}

The computer programs for the linewidth calculations have been outlined in detail in Ref. 21. For the perturbing molecule, in self-broadening in this work, rotational levels

with $N \leq 45$ and $K_a \leq 10$ were taken into account. This range of quantum numbers covers 98.84% of the population in the Boltzmann distribution for the ground vibrational state at 300°K. The pertinent data²¹ for these rotational levels (total number being 428) were put on a disk as opposed to a tape. (It was found that the use of a tape²¹ resulted in appreciable tape drive charges.) Storing the data on a disk instead of a tape brings down the overall charges for the computer resources usage by about 5% in the asymmetric top self-broadened linewidth calculations.

Average CPU time per transition taken by NO₂ self-broadened linewidth calculations is about 200 secs as compared to about 500 secs required²¹ for $\gamma_{0_3-0_3}^\circ$. It is due to the fact that the total number of rotational energy levels of the perturbing molecule to be taken into consideration are much less in NO₂, and also, because the separation between the rotational energy levels in NO₂ is larger than the corresponding separation in O₃.

Rotational and centrifugal distortion constants, in the ground state of nitrogen dioxide, have been taken from Lafferty and Sams.⁷ As in the case of ozone linewidth calculations,^{21,22} small differences in the rotational and centrifugal distortion constants between the ground and upper states of NO₂ have been neglected. Spin splitting of the energy levels of NO₂ due to the unpaired electron has also been neglected. The ground state rotational and centrifugal distortion constants for

nitrogen and oxygen were obtained from the pure rotational Raman spectra of these gases.²⁴ Kinetic theory collision diameters for N_2 and O_2 were taken from Svehla.²⁵ In the absence of any direct value, the molecular diameter of NO_2 was obtained by using the combining rule (C7) from Ref. 25 and the molecular diameters of N_2 and O_2 .

The quadrupole moments of N_2 and O_2 have been taken from the induced birefringence measurements of Buckingham et al.²⁶ There are only two sets of values²⁰ available in the literature for the quadrupole moments of NO_2 . Both of them are ab initio self-consistent field calculations.²⁰ One of these values for the quadrupole moment tensor was obtained by excluding d (or polarization) functions. The other value includes d functions in the calculation. There are no experimental measurements on the quadrupole moment components of NO_2 . The use of ab initio values (with d functions) for the quadrupole moments of ozone obtained by Rothenberg and Schaefer²⁰ gave us the best agreement between the measured and computed values for the self-broadened linewidths of O_3 .^{21,22} Also, the importance of using d functions in ab initio calculations in obtaining good agreement with the measured values for the molecular properties has been shown in Refs. 20, 27, and 28. Therefore, we have used the quadrupole moments of NO_2 obtained by Rothenberg and Schaefer²⁰ (with d functions) in the linewidth calculations presented in this report. The values²⁰ are $\theta_{xx} = 1.48 \times 10^{-26}$ esu $\cdot$ cm², $\theta_{yy} = -3.65 \times 10^{-26}$ esu $\cdot$ cm², and $\theta_{zz} = 2.17 \times 10^{-26}$

esu·cm².

For the type A band, line position and relative line intensity at 300°K have been computed for the transitions in the ν_3 fundamental. These quantities in the ν_2 fundamental have been calculated for type B band transitions. The band centers for these two fundamentals have been taken from Refs. 4 (ν_2 band) and 5 (ν_3 band).

III. RESULTS AND DISCUSSION

In Table I, nitrogen-broadened linewidths of NO₂ at 300°K, obtained by using two different sets of quadrupole moments for nitrogen dioxide given by Rothenberg and Schaefer²⁰, are shown for a few low N transitions. The first set of quadrupole moment components is with d functions, the second set without d functions.²⁰ As discussed earlier, the first set of quadrupole moments for NO₂ has been used in the extensive computations of the linewidths of NO₂ presented in this report.

N₂- and O₂-broadened linewidths of NO₂ at 300°K for more than 1000 transitions have been computed for type A as well as type B bands. As in the case of ozone linewidth calculations,²¹ only transitions with $\Delta K_a \leq 1$ have been considered. The quantum number range for the transitions is $0 \leq N \leq 40$ and $0 \leq K_a \leq 10$, comprising 96.9% of the population in the Boltzmann distribution for the ground state of NO₂ at 300°K. These linewidth values along with other results discussed below are given in Appendices A and B for bands of type A and type B, respectively. Only ν_3 fundamental

Table I. Calculated values for N₂-broadened linewidths of NO₂ for a few transitions using two different sets of quadrupole moments for NO₂. Units of θ are 10⁻²⁶ esu.cm².

Transition	$\gamma_{\text{NO}_2-\text{N}_2}^\circ$ (cm ⁻¹ atm ⁻¹) at 300°K	
	$\theta_{xx} = 1.48$ $\theta_{yy} = -3.65$ $\theta_{zz} = 2.17$	$\theta_{xx} = 2.04$ $\theta_{yy} = -5.14$ $\theta_{zz} = 3.10$
<u>Type A Band</u>		
0 _{0,0} - 1 _{0,1}	0.0746	0.0853
1 _{1,1} - 2 _{1,2}	0.0739	0.0858
1 _{1,1} - 1 _{1,0}	0.0734	0.0852
2 _{0,2} - 3 _{0,3}	0.0722	0.0823
2 _{0,2} - 1 _{0,1}	0.0730	0.0833
2 _{1,1} - 3 _{1,2}	0.0716	0.0831
2 _{1,1} - 2 _{1,2}	0.0766	0.0890
2 _{1,1} - 1 _{1,0}	0.0736	0.0854
2 _{2,0} - 3 _{2,1}	0.0735	0.0846
2 _{2,0} - 2 _{2,1}	0.0710	0.0816
<u>Type B Band</u>		
0 _{0,0} - 1 _{1,1}	0.0749	0.0865
1 _{1,1} - 2 _{2,0}	0.0747	0.0866
2 _{0,2} - 3 _{1,3}	0.0723	0.0831
2 _{0,2} - 2 _{1,1}	0.0759	0.0876
2 _{0,2} - 1 _{1,1}	0.0742	0.0856
2 _{1,1} - 3 _{2,2}	0.0743	0.0862
2 _{1,1} - 2 _{2,0}	0.0734	0.0850
2 _{2,0} - 3 _{3,1}	0.0695	0.0803

and its odd overtone or combination bands belong to type A. All other vibration-rotation bands and the pure rotational band of NO_2 are of type B.

Air-broadened linewidths of nitrogen dioxide at 200°K are also given in Appendices. $\gamma_{\text{NO}_2\text{-air}}^\circ$ at 300°K can be easily calculated by using

$$\gamma_{\text{NO}_2\text{-air}}^\circ = 0.79 \gamma_{\text{NO}_2\text{-N}_2}^\circ + 0.21 \gamma_{\text{NO}_2\text{-O}_2}^\circ . \quad (1)$$

Air-broadened linewidths of NO_2 at any other temperature T of atmospheric interest can be obtained by the use of the relation

$$\gamma^\circ(T) \propto T^{-n} , \quad (2)$$

where exponent n in the power law is given by

$$n = \ln \left[\frac{\gamma^\circ(200)}{\gamma^\circ(300)} \right] / \ln \left(\frac{3}{2} \right) . \quad (3)$$

Self-broadened linewidths of NO_2 for a limited number of transitions (i.e., with $0 \leq N < 10$ and $0 \leq K_a \leq 5$ for both types of bands, and with $11 \leq N \leq 20$ and $0 \leq K_a \leq 5$ for R-branch type B band only) are also tabulated in the Appendices. Weighted mean linewidths of NO_2 broadened by N_2 , O_2 , air, and NO_2 at 300°K and by N_2 , O_2 , and air at 200°K are given in Table II. Averaging has been performed over only those transitions for which linewidths are given in the Appendices. Thus the averaging over self-broadened linewidths is restricted to a limited number of transitions. Weighting has been done with respect to the relative intensity of the transition. Estimated

Table II. Weighted average linewidths of NO₂.
Units of linewidth are cm⁻¹ atm⁻¹.

Band Type	Broadener	Average Linewidth	
		at 300°K	at 200°K
A	N ₂	0.0806	0.1051
	O ₂	0.0452	0.0591
	Air	0.0731	0.0955
	NO ₂	0.1165 ^a	
B	N ₂	0.0682	0.0912
	O ₂	0.0390	0.0513
	Air	0.0620	0.0828
	NO ₂	0.1025 ^a	

^aThis average is over a comparatively limited number of transitions. The average weighted linewidth over all the transitions in the whole range of quantum numbers is expected to be slightly less than the number shown in the table.

average self-broadened linewidth⁸ for ν_3 band of NO_2 is in good agreement with the corresponding value for the type A band in Table II.

The rotational energy level of the lower state for each transition along with its line position and relative line intensity at 300°K have also been tabulated in the Appendices. Line positions and relative line intensities in Appendix A refer to ν_3 fundamental and in Appendix B to ν_2 fundamental. However, the values for these two parameters are only approximate since the upper state molecular constants have been assumed to be the same as corresponding ground state constants. Line positions may be off in some instances by about 10 cm^{-1} . Relative line intensities are in better shape and are expected to be accurate within $\pm 5\%$. For precise values of line positions in ν_2 and ν_3 bands, one should refer to Refs. 4 (ν_2 band), 5 and 6 (ν_3 band).

In Appendices A and B, the linewidth value would remain unchanged for an interchange of lower and upper state quantum numbers. In vivid contrast to the linewidth values for NO_2 in Ref. 17 where only the dipole moment of NO_2 was taken into consideration, $\gamma_{\text{NO}_2-\text{N}_2}^\circ$, $\gamma_{\text{NO}_2-\text{O}_2}^\circ$, and $\gamma_{\text{NO}_2-\text{NO}_2}^\circ$ show a strong dependence with respect to the quantum numbers of the transition. Also, the multiplying factors suggested in Ref. 17 to incorporate the contributions to the linewidth from the higher order interactions were underestimated. Clearly it shows that the contributions arising due to the quadrupole moment of NO_2

to the linewidth value are very dominant. As a matter of fact, dipolar interactions have been found to contribute at the most 8% to the linewidth.

The lack of any experimental data on self- or foreign-gas-broadened linewidths of NO_2 is very discomfoting. It would indeed be useful to measure the linewidth for a few isolated transitions in the microwave where better resolution is available. Also, by using tunable lasers,²⁹ it should be possible to measure the linewidths in the infrared.

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V. APPENDIX A

LISTING OF LINEWIDTHS FOR TYPE A BAND

Linewidths and other spectral parameters for transitions in a type A band of NO_2 are listed in this Appendix. First three columns in the tabulation refer to the lower state quantum numbers N , K_a , and K_c , respectively; while column numbers 4 to 6 give these quantum numbers for the upper state of the transition. Column number 7 shows the approximate line position in cm^{-1} for the transition in the ν_3 fundamental of nitrogen dioxide. Rotational energy level in cm^{-1} for the lower state is given in the column 8 and the relative line intensity at 300°K for the transition in the ν_3 band is shown in column 9. Next four columns, i.e., columns 10 through 13 list self-, N_2 -, O_2 -, and air-broadened linewidths of NO_2 given in the units of $10^{-4} \text{ cm}^{-1} \text{ atm}^{-1}$. $\gamma_{\text{NO}_2\text{-air}}^\circ$ is at 200°K , all other linewidth values reported here are at 300°K . Self-broadened linewidths have not been calculated for all the transitions in the listing. A blank appears in the column 10 for the transition when $\gamma_{\text{NO}_2\text{-NO}_2}^\circ$ has not been computed. All the linewidth results in this Appendix should be applicable to any type A band.

Listing of Linewidth Parameters for Type A Band of NO₂

Lower State			Upper State			Line Position in the ν_3 Band (cm ⁻¹)	Rotational Energy of the Lower State (cm ⁻¹)	Relative Line Intensity (ν_3 Band) at 300°K	γ° (in 10 ⁻⁴ cm ⁻¹ atm ⁻¹) of NO ₂			
N	K _a	K _c	N	K _a	K _c				NO ₂	N ₂	O ₂	Air
									300°K	300°K		200°K
0	0	0	1	0	1	1617.7	0.0	1.00	1097	746	428	896
1	1	1	2	1	2	1618.5	8.410	1.44	1086	739	412	896
1	1	1	1	1	0	1616.9	8.410	1.44	1080	734	410	890
2	0	2	3	0	3	1619.4	2.532	2.97	1080	722	414	865
2	0	2	1	0	1	1615.2	2.532	1.97	1090	730	419	874
2	1	1	3	1	2	1619.4	10.145	2.54	1041	716	402	870
2	1	1	2	1	2	1616.8	10.145	0.79	1088	766	425	932
2	1	1	1	1	0	1615.1	10.145	1.43	1082	736	410	894
2	2	0	3	2	1	1619.4	32.811	1.43	1062	735	419	867
2	2	0	2	2	1	1616.8	32.811	2.85	1040	710	407	834
3	1	3	4	1	4	1620.2	12.573	3.54	1026	612	362	744
3	1	3	3	1	2	1617.0	12.573	0.55	1030	721	404	876
3	1	3	2	1	2	1614.3	12.573	2.51	1078	691	391	839
3	2	2	4	2	3	1620.2	35.344	2.54	1043	723	408	859
3	2	2	3	2	1	1616.8	35.344	1.97	1059	732	416	867
3	2	2	2	2	1	1614.3	35.344	1.40	1037	716	408	847
3	3	1	4	3	2	1620.2	73.074	1.23	1094	762	428	928
3	3	1	3	3	0	1616.8	73.074	3.70	1114	763	429	930
4	0	4	5	0	5	1621.1	8.441	4.81	992	669	384	796
4	0	4	3	0	3	1613.5	8.441	3.83	1044	703	402	840
4	1	3	5	1	4	1621.1	16.135	4.45	1080	742	412	901
4	1	3	4	1	4	1616.6	16.135	0.42	974	679	387	828
4	1	3	3	1	2	1613.4	16.135	3.46	977	669	382	814
4	2	2	5	2	3	1621.1	38.722	3.50	1036	709	404	843
4	2	2	4	2	3	1616.8	38.722	1.49	1057	735	413	871
4	2	2	3	2	1	1613.5	38.722	2.49	1072	746	421	883
4	3	1	5	3	2	1621.1	76.452	2.22	1145	800	446	972
4	3	1	4	3	2	1616.8	76.452	2.81	1074	754	423	915
4	3	1	3	3	0	1613.5	76.452	1.21	1095	762	428	928
4	4	0	5	4	1	1621.1	129.053	0.97	1092	794	433	929
4	4	0	4	4	1	1616.8	129.053	3.88	1100	783	427	922
5	1	5	6	1	6	1621.8	20.065	5.31	1123	770	427	929

5	1	5	5	1	4	1617.2	20.065	0.33	1158	782	433	942
5	1	5	4	1	4	1612.7	20.065	4.35	1086	795	440	965
5	2	4	6	2	5	1621.9	42.942	4.35	1074	775	431	923
5	2	4	5	2	3	1616.8	42.942	1.19	971	641	378	765
5	2	4	4	2	3	1612.6	42.942	3.41	999	680	389	810
5	3	3	6	3	4	1621.9	80.674	3.06	1128	793	440	964
5	3	3	5	3	2	1616.8	80.674	2.24	1203	835	463	1013
5	3	3	4	3	2	1612.6	80.674	2.17	1145	800	446	972
5	4	2	6	4	3	1621.9	133.277	1.76	1135	824	448	976
5	4	2	5	4	1	1616.8	133.277	3.09	1062	781	426	915
5	4	2	4	4	1	1612.6	133.277	0.95	1072	775	425	916
5	5	1	6	5	2	1621.9	200.538	0.70	1091	752	405	866
5	5	1	5	5	0	1616.8	200.538	3.50	1120	760	408	873
6	0	6	7	0	7	1622.8	17.723	6.45	1162	792	440	928
6	0	6	5	0	5	1611.8	17.723	5.49	1115	791	441	941
6	1	5	7	1	6	1622.8	25.548	6.09	1176	810	446	975
6	1	5	6	1	6	1616.4	25.548	0.27	1091	753	417	910
6	1	5	5	1	4	1611.7	25.548	5.14	1129	772	427	932
6	2	4	7	2	5	1622.8	48.012	5.12	1195	837	465	987
6	2	4	6	2	5	1616.8	48.012	0.98	1203	831	461	978
6	2	4	5	2	3	1611.8	48.012	4.22	1141	818	459	974
6	3	3	7	3	4	1622.8	85.741	3.80	1167	832	462	1004
6	3	3	6	3	4	1616.8	85.741	1.85	1032	717	402	871
6	3	3	5	3	2	1611.8	85.741	2.97	1128	793	440	964
6	4	2	7	4	3	1622.8	138.346	2.44	1164	848	459	999
6	4	2	6	4	3	1616.8	138.346	2.55	1209	869	472	1026
6	4	2	5	4	1	1611.8	138.346	1.71	1153	841	456	987
6	5	1	7	5	2	1622.8	205.608	1.28	1147	794	426	920
6	5	1	6	5	2	1616.8	205.608	2.89	1058	737	398	851
6	5	1	5	5	0	1611.8	205.608	0.68	1091	752	405	866
6	6	0	7	6	1	1622.8	287.262	0.47		707	388	825
6	6	0	6	6	1	1616.8	287.262	2.81		713	389	830
7	1	7	8	1	8	1623.5	30.887	6.82	1196	823	453	986
7	1	7	7	1	6	1617.5	30.887	0.23	1237	845	466	1015
7	1	7	6	1	6	1611.0	30.887	5.89	1169	809	446	972
7	2	6	8	2	7	1623.6	53.917	5.81	1165	811	449	955
7	2	6	7	2	5	1616.9	53.917	0.83	1125	788	438	931
7	2	6	6	2	5	1610.9	53.917	4.94	1133	786	435	923
7	3	5	8	3	6	1623.6	91.653	4.45	1219	855	473	1022
7	3	5	7	3	4	1616.8	91.653	1.55	1262	880	487	1053
7	3	5	6	3	4	1610.9	91.653	3.67	1167	833	462	1004
7	4	4	8	4	5	1623.6	144.259	3.02	1161	843	458	993
7	4	4	7	4	3	1616.8	144.259	2.14	1091	796	433	942
7	4	4	6	4	3	1610.9	144.259	2.35	1145	830	451	986
7	5	3	8	5	4	1623.6	211.524	1.77	1170	811	436	942
7	5	3	7	5	2	1616.8	211.524	2.43	1216	832	447	966
7	5	3	6	5	2	1610.9	211.524	1.24	1147	794	426	920
7	6	2	8	6	3	1623.6	293.180	0.86		749	407	879
7	6	2	7	6	1	1616.8	293.180	2.36		695	383	813
7	6	2	6	6	1	1610.9	293.180	0.45		707	388	825
7	7	1	8	7	2	1623.6	388.916	0.29		678	379	803
7	7	1	7	7	0	1616.8	388.916	2.03		681	380	806
8	0	8	9	0	9	1624.4	30.377	7.81	1244	862	478	1009
8	0	8	7	0	7	1610.1	30.377	6.88	1208	832	462	976

8	1	7	9	1	8	1624.5	38.383	7.43	1204	827	457	988
E	1	7	8	1	8	1616.0	38.383	0.20	1152	797	439	954
8	1	7	7	1	6	1610.0	38.383	6.52	1200	825	454	990
E	2	6	9	2	7	1624.4	60.682	6.42	1272	885	494	1052
E	2	6	8	2	7	1616.8	60.682	0.71	1268	878	489	1038
E	2	6	7	2	5	1610.1	60.682	5.58	1238	866	481	1026
E	3	5	9	3	6	1624.4	98.409	5.01	1225	859	477	1022
8	3	5	8	3	6	1616.8	98.409	1.32	1171	823	457	985
E	3	5	7	3	4	1610.1	98.409	4.27	1220	855	474	1022
8	4	4	9	4	5	1624.4	151.017	3.52	1219	880	477	1016
8	4	4	8	4	5	1616.8	151.017	1.83	1241	889	484	1033
E	4	4	7	4	3	1610.1	151.017	2.89	1187	865	469	1009
8	5	3	9	5	4	1624.5	218.284	2.19	1173	813	438	938
E	5	3	8	5	4	1616.8	218.284	2.07	1116	782	421	907
8	5	3	7	5	2	1610.1	218.284	1.70	1170	811	436	942
E	6	2	9	6	3	1624.5	299.944	1.19		770	418	902
E	6	2	8	6	3	1616.8	299.944	2.02		787	426	922
8	6	2	7	6	1	1610.1	299.944	0.83		749	407	879
E	7	1	9	7	2	1624.5	395.684	0.54		723	400	857
8	7	1	8	7	2	1616.8	395.684	1.73		669	377	792
E	7	1	7	7	0	1610.1	395.684	0.28		678	379	803
8	8	0	9	8	1	1624.5	505.153	0.17		662	376	789
E	8	0	8	8	1	1616.8	505.153	1.34		663	376	792
9	1	9	10	1	10	1625.2	45.037	8.01	1209	829	460	985
9	1	9	9	1	8	1617.9	45.037	0.17	1244	848	471	1010
9	1	9	8	1	8	1609.4	45.037	7.13	1200	826	456	985
9	2	8	10	2	9	1625.3	68.267	6.95	1181	822	456	962
9	2	8	9	2	7	1616.9	68.267	0.61	1190	832	462	985
9	2	8	8	2	7	1609.2	68.267	6.13	1185	824	456	969
9	3	7	10	3	8	1625.3	106.009	5.50	1236	866	482	1025
9	3	7	9	3	6	1616.8	106.009	1.14	1271	885	493	1051
9	3	7	8	3	6	1609.2	106.009	4.79	1225	860	477	1022
9	4	6	10	4	7	1625.3	158.619	3.94	1187	851	465	993
9	4	6	9	4	5	1616.8	158.619	1.58	1162	842	456	976
9	4	6	8	4	5	1609.2	158.619	3.36	1187	854	464	998
9	5	5	10	5	6	1625.3	225.890	2.55	1187	816	441	935
9	5	5	9	5	4	1616.8	225.890	1.79	1222	834	449	955
9	5	5	8	5	4	1609.2	225.890	2.10	1173	813	438	938
9	6	4	10	6	5	1625.3	307.554	1.47		770	419	894
9	6	4	9	6	3	1616.8	307.554	1.74		749	409	876
9	6	4	8	6	3	1609.2	307.554	1.14		770	418	902
9	7	3	10	7	4	1625.3	403.298	0.74		746	411	880
9	7	3	9	7	2	1616.8	403.298	1.49		761	417	898
9	7	3	8	7	2	1609.2	403.298	0.51		723	400	857
9	8	2	10	8	3	1625.3	512.772	0.31		709	396	841
9	8	2	9	8	1	1616.8	512.772	1.15		655	374	780
9	8	2	8	8	1	1609.2	512.772	0.16		662	376	789
9	9	1	10	9	2	1625.3	635.597	0.09		651	374	776
9	9	1	9	9	0	1616.8	635.597	0.81		653	374	779
10	0	10	11	0	11	1626.1	46.398	8.85	1252	865	482	1009
10	0	10	9	0	9	1608.4	46.398	7.96	1245	863	480	1008
10	1	9	11	1	10	1626.3	54.637	8.44	1211	827	462	977
10	1	9	10	1	10	1615.6	54.637	0.15	1174	808	448	957
10	1	9	9	1	8	1608.3	54.637	7.57	1213	830	462	987

10	2	8	11	2	9	1626.1	76.734	7.40	1280	885	497	1050
10	2	8	10	2	9	1616.8	76.734	0.53	1267	874	489	1029
10	2	8	9	2	7	1608.4	76.734	6.61	1274	885	495	1051
10	3	7	11	3	8	1626.1	114.454	5.91	1234	862	483	1017
10	3	7	10	3	8	1616.8	114.454	0.99	1196	841	470	996
10	3	7	9	3	6	1608.4	114.454	5.23	1236	865	482	1025
10	4	6	11	4	7	1626.1	167.066	4.31	1226	880	481	1010
10	4	6	10	4	7	1616.8	167.066	1.37	1241	886	485	1022
10	4	6	9	4	5	1608.4	167.066	3.75	1220	879	479	1012
10	5	5	11	5	6	1626.1	234.340	2.85	1185	814	442	927
10	5	5	10	5	6	1616.8	234.340	1.55	1148	796	430	911
10	5	5	9	5	4	1608.4	234.340	2.42	1187	816	441	936
10	6	4	11	6	5	1626.1	316.008	1.71		770	420	886
10	6	4	10	6	5	1616.8	316.008	1.51		785	427	904
10	6	4	9	6	3	1608.4	316.008	1.40		770	419	894
10	7	3	11	7	4	1626.2	411.757	0.91		743	411	869
10	7	3	10	7	4	1616.8	411.757	1.30		728	403	856
10	7	3	9	7	2	1608.4	411.757	0.70		746	411	880
10	8	2	11	8	3	1626.2	521.237	0.43		732	408	865
10	8	2	10	8	3	1616.8	521.237	1.00		746	414	882
10	8	2	9	8	1	1608.4	521.237	0.29		709	396	841
10	9	1	11	9	2	1626.2	644.069	0.17		698	394	826
10	9	1	10	9	2	1616.8	644.069	0.70		644	372	769
10	9	1	9	9	0	1608.4	644.069	0.09		651	374	776
10	10	0	11	10	1	1626.2	779.857	0.05		642	373	765
10	10	0	10	10	1	1616.8	779.857	0.45		643	373	766
11	1	11	12	1	12	1626.8	62.513	8.88		823	461	968
11	1	11	11	1	10	1618.4	62.513	0.13		840	472	991
11	1	11	10	1	10	1607.7	62.513	8.03		825	461	975
11	2	10	12	2	11	1627.0	85.991	7.77		815	455	947
11	2	10	11	2	9	1616.9	85.991	0.46		833	466	980
11	2	10	10	2	9	1607.6	85.991	7.00		820	456	956
11	3	9	12	3	10	1627.0	123.743	6.25		861	483	1011
11	3	9	11	3	8	1616.8	123.743	0.87		878	493	1034
11	3	9	10	3	8	1607.6	123.743	5.59		862	482	1017
11	4	8	12	4	9	1627.0	176.358	4.60		846	466	979
11	4	8	11	4	7	1616.8	176.358	1.20		843	461	972
11	4	8	10	4	7	1607.6	176.358	4.07		851	466	988
11	5	7	12	5	8	1627.0	243.636	3.10		812	443	921
11	5	7	11	5	6	1616.8	243.636	1.35		828	450	939
11	5	7	10	5	6	1607.6	243.636	2.70		814	442	927
11	6	6	12	6	7	1627.0	325.308	1.90		766	421	876
11	6	6	11	6	5	1616.8	325.308	1.32		752	413	865
11	6	6	10	6	5	1607.5	325.308	1.61		770	420	887
11	7	5	12	7	6	1627.0	421.063	1.06		740	412	859
11	7	5	11	7	4	1616.8	421.063	1.13		753	417	875
11	7	5	10	7	4	1607.5	421.063	0.86		743	411	869
11	8	4	12	8	5	1627.0	530.549	0.53		727	408	851
11	8	4	11	8	3	1616.8	530.549	0.88		715	401	841
11	8	4	10	8	3	1607.5	530.549	0.40		732	408	865
11	9	3	12	9	4	1627.0	653.388	0.23		721	407	850
11	9	3	11	9	2	1616.8	653.388	0.61		734	413	867
11	9	3	10	9	2	1607.5	653.388	0.16		698	394	826
11	10	2	12	10	3	1627.0	789.184	0.08		689	393	812

11	10	2	11	10	1	1616.8	789.184	0.40	636	371	758
11	10	2	10	10	1	1607.5	789.184	0.04	642	373	765
12	0	12	13	0	13	1627.8	65.783	9.54	860	482	1002
12	0	12	11	0	11	1606.7	65.783	8.69	862	482	1005
12	1	11	13	1	12	1628.0	74.310	9.11	818	462	961
12	1	11	12	1	12	1615.0	74.310	0.11	804	451	945
12	1	11	11	1	10	1606.6	74.310	8.29	824	463	971
12	2	10	13	2	11	1627.8	96.172	8.05	877	497	1038
12	2	10	12	2	11	1616.8	96.172	0.40	863	487	1013
12	2	10	11	2	9	1606.7	96.172	7.31	880	496	1042
12	3	9	13	3	10	1627.8	133.878	6.52	856	484	1004
12	3	9	12	3	10	1616.8	133.878	0.76	839	473	986
12	3	9	11	3	8	1606.7	133.878	5.88	861	484	1011
12	4	8	13	4	9	1627.8	186.494	4.84	875	482	999
12	4	8	12	4	9	1616.8	186.494	1.05	877	485	1006
12	4	8	11	4	7	1606.7	186.494	4.33	877	481	1003
12	5	7	13	5	8	1627.8	253.776	3.30	809	442	913
12	5	7	12	5	8	1616.8	253.776	1.19	794	434	901
12	5	7	11	5	6	1606.7	253.776	2.92	813	443	922
12	6	6	13	6	7	1627.8	335.453	2.06	763	421	868
12	6	6	12	6	7	1616.8	335.453	1.15	777	427	883
12	6	6	11	6	5	1606.7	335.453	1.79	766	421	876
12	7	5	13	7	6	1627.8	431.213	1.17	735	411	846
12	7	5	12	7	6	1616.8	431.213	0.99	725	405	839
12	7	5	11	7	4	1606.7	431.213	0.99	740	412	859
12	8	4	13	8	5	1627.8	540.707	0.61	722	408	840
12	8	4	12	8	5	1616.8	540.707	0.77	734	413	856
12	8	4	11	8	3	1606.7	540.707	0.50	727	408	851
12	9	3	13	9	4	1627.9	663.553	0.28	714	407	835
12	9	3	12	9	4	1616.8	663.553	0.54	705	401	828
12	9	3	11	9	2	1606.7	663.553	0.22	721	407	850
12	10	2	13	10	3	1627.9	799.359	0.12	712	407	835
12	10	2	12	10	3	1616.8	799.359	0.35	724	411	852
12	10	2	11	10	1	1606.7	799.359	0.08	689	393	812
13	1	13	14	1	14	1628.5	83.314	9.40	814	461	951
13	1	13	13	1	12	1619.0	83.314	0.10	829	470	970
13	1	13	12	1	12	1606.0	83.314	8.60	817	461	958
13	2	12	14	2	13	1628.7	107.089	8.26	803	452	932
13	2	12	13	2	11	1616.9	107.089	0.35	827	467	969
13	2	12	12	2	11	1605.9	107.089	7.54	811	454	941
13	3	11	14	3	12	1628.7	144.855	6.71	853	483	999
13	3	11	13	3	10	1616.8	144.855	0.67	868	492	1018
13	3	11	12	3	10	1605.9	144.855	6.10	856	483	1003
13	4	10	14	4	11	1628.7	197.475	5.02	836	464	965
13	4	10	13	4	9	1616.8	197.475	0.92	839	463	963
13	4	10	12	4	9	1605.9	197.475	4.53	842	466	973
13	5	9	14	5	10	1628.7	264.760	3.45	805	442	907
13	5	9	13	5	8	1616.8	264.760	1.04	820	449	922
13	5	9	12	5	8	1605.9	264.760	3.09	808	442	913
13	6	8	14	6	9	1628.7	346.443	2.18	757	420	858
13	6	8	13	6	7	1616.8	346.443	1.01	747	414	849
13	6	8	12	6	7	1605.9	346.443	1.93	763	421	868
13	7	7	14	7	8	1628.7	442.210	1.27	729	411	836
13	7	7	13	7	6	1616.8	442.210	0.87	741	416	849

13	7	7	12	7	6	1605.8	442.210	1.10	735	411	846
13	8	6	14	8	7	1628.7	551.710	0.67	714	407	827
13	8	6	13	8	5	1616.8	551.710	0.67	706	401	820
13	8	6	12	8	5	1605.8	551.710	0.57	722	408	840
13	9	5	14	9	6	1628.7	674.566	0.33	708	406	824
13	9	5	13	9	4	1616.8	674.566	0.47	719	410	838
13	9	5	12	9	4	1605.8	674.566	0.26	714	407	835
13	10	4	14	10	5	1628.7	810.381	0.14	704	405	822
13	10	4	13	10	3	1616.8	810.381	0.30	697	400	815
13	10	4	12	10	3	1605.8	810.381	0.11	712	407	835
14	0	14	15	0	15	1629.5	88.525	9.88	851	480	993
14	0	14	13	0	13	1605.1	88.525	9.08	855	481	996
14	1	13	15	1	14	1629.7	97.399	9.43	809	461	947
14	1	13	14	1	14	1614.4	97.399	0.09	798	452	932
14	1	13	13	1	12	1604.9	97.399	8.66	815	462	954
14	2	12	15	2	13	1629.5	118.998	8.39	869	495	1026
14	2	12	14	2	13	1616.7	118.998	0.31	852	484	996
14	2	12	13	2	11	1605.0	118.998	7.69	871	495	1030
14	3	11	15	3	12	1629.5	156.679	6.84	850	484	993
14	3	11	14	3	12	1616.8	156.679	0.59	834	474	977
14	3	11	13	3	10	1605.0	156.679	6.25	854	484	999
14	4	10	15	4	11	1629.5	209.300	5.14	867	481	991
14	4	10	14	4	11	1616.8	209.300	0.81	865	482	993
14	4	10	13	4	9	1605.0	209.300	4.68	870	481	993
14	5	9	15	5	10	1629.5	276.590	3.56	800	441	903
14	5	9	14	5	10	1616.8	276.590	0.92	788	435	890
14	5	9	13	5	8	1605.0	276.590	3.22	806	442	908
14	6	8	15	6	9	1629.5	358.278	2.28	753	420	851
14	6	8	14	6	9	1616.8	358.278	0.89	765	425	863
14	6	8	13	6	7	1605.0	358.278	2.03	757	420	857
14	7	7	15	7	8	1629.5	454.052	1.34	722	409	825
14	7	7	14	7	8	1616.8	454.052	0.77	715	404	819
14	7	7	13	7	6	1605.0	454.052	1.18	729	411	836
14	8	6	15	8	7	1629.5	563.560	0.72	708	406	817
14	8	6	14	8	7	1616.8	563.560	0.59	719	410	829
14	8	6	13	8	5	1605.0	563.560	0.63	714	407	827
14	9	5	15	9	6	1629.6	686.425	0.36	700	404	813
14	9	5	14	9	6	1616.8	686.425	0.42	694	400	807
14	9	5	13	9	4	1605.0	686.425	0.30	708	406	824
14	10	4	15	10	5	1629.6	822.250	0.16	697	404	812
14	10	4	14	10	5	1616.8	822.250	0.27	709	409	824
14	10	4	13	10	3	1605.0	822.250	0.13	704	405	822
15	1	15	16	1	16	1630.2	107.438	9.59	804	459	937
15	1	15	15	1	14	1619.6	107.438	0.08	817	467	954
15	1	15	14	1	14	1604.4	107.438	8.85	808	459	942
15	2	14	16	2	15	1630.3	131.557	8.45	792	448	920
15	2	14	15	2	13	1617.0	131.557	0.27	820	466	962
15	2	14	14	2	13	1604.2	131.557	7.77	799	451	926
15	3	13	16	3	14	1630.4	169.345	6.91	845	482	989
15	3	13	15	3	12	1616.8	169.345	0.52	860	490	1006
15	3	13	14	3	12	1604.2	169.345	6.34	848	482	993
15	4	12	16	4	13	1630.4	221.969	5.21	827	461	955
15	4	12	15	4	11	1616.8	221.969	0.71	833	462	957
15	4	12	14	4	11	1604.2	221.969	4.77	832	463	960

15	5	11	16	5	12	1630.4	289.263	3.63	796	440	899
15	5	11	15	5	10	1616.8	289.263	0.81	810	446	912
15	5	11	14	5	10	1604.2	289.263	3.30	800	441	902
15	6	10	16	6	11	1630.4	370.958	2.34	747	418	844
15	6	10	15	6	9	1616.8	370.958	0.78	738	413	836
15	6	10	14	6	9	1604.2	370.958	2.11	753	420	851
15	7	9	16	7	10	1630.4	466.739	1.39	716	408	818
15	7	9	15	7	8	1616.8	466.739	0.67	726	413	828
15	7	9	14	7	8	1604.2	466.739	1.24	722	409	825
15	8	8	16	8	9	1630.4	576.256	0.76	699	404	807
15	8	8	15	8	7	1616.8	576.256	0.52	694	400	802
15	8	8	14	8	7	1604.1	576.256	0.67	708	406	817
15	9	7	16	9	8	1630.4	699.131	0.39	693	403	804
15	9	7	15	9	6	1616.8	699.131	0.37	702	407	815
15	9	7	14	9	6	1604.1	699.131	0.33	700	404	813
15	10	6	16	10	7	1630.4	834.967	0.18	689	402	802
15	10	6	15	10	5	1616.8	834.967	0.24	684	398	797
15	10	6	14	10	5	1604.1	834.967	0.15	697	404	812
16	0	16	17	0	17	1631.1	114.618	9.89	843	479	985
16	0	16	15	0	15	1603.4	114.618	9.15	846	479	987
16	1	15	17	1	16	1631.4	123.902	9.43	802	459	939
16	1	15	16	1	16	1613.7	123.902	0.07	791	451	923
16	1	15	15	1	14	1603.2	123.902	8.72	806	461	943
16	2	14	17	2	15	1631.2	145.217	8.43	862	493	1021
16	2	14	16	2	15	1616.7	145.217	0.24	842	481	987
16	2	14	15	2	13	1603.3	145.217	7.78	864	493	1022
16	3	13	17	3	14	1631.2	182.858	6.91	845	483	987
16	3	13	16	3	14	1616.8	182.858	0.45	830	474	971
16	3	13	15	3	12	1603.3	182.858	6.37	848	484	990
16	4	12	17	4	13	1631.2	235.483	5.23	860	479	986
16	4	12	16	4	13	1616.8	235.483	0.63	856	479	985
16	4	12	15	4	11	1603.3	235.483	4.81	863	480	987
16	5	11	17	5	12	1631.2	302.782	3.67	792	438	896
16	5	11	16	5	12	1616.8	302.782	0.71	780	433	884
16	5	11	15	5	10	1603.3	302.782	3.35	796	440	899
16	6	10	17	6	11	1631.2	384.482	2.37	742	417	839
16	6	10	16	6	11	1616.8	384.482	0.69	752	423	848
16	6	10	15	6	9	1603.3	384.482	2.16	746	418	844
16	7	9	17	7	10	1631.2	480.271	1.42	710	406	811
16	7	9	16	7	10	1616.8	480.271	0.59	704	402	805
16	7	9	15	7	8	1603.3	480.271	1.28	716	408	818
16	8	8	17	8	9	1631.2	589.798	0.79	693	402	801
16	8	8	16	8	9	1616.8	589.798	0.46	702	406	810
16	8	8	15	8	7	1603.3	589.798	0.70	699	404	807
16	9	7	17	9	8	1631.2	712.683	0.40	685	400	796
16	9	7	16	9	8	1616.8	712.683	0.32	681	397	791
16	9	7	15	9	6	1603.3	712.683	0.36	693	403	804
16	10	6	17	10	7	1631.3	848.530	0.19	681	400	795
16	10	6	16	10	7	1616.8	848.530	0.21	691	404	804
16	10	6	15	10	5	1603.3	848.530	0.17	689	402	802
17	1	17	18	1	18	1631.8	134.884	9.48	795	456	927
17	1	17	17	1	16	1620.4	134.884	0.06	808	464	945
17	1	17	16	1	16	1602.7	134.884	8.79	798	457	931
17	2	16	18	2	17	1632.0	159.395	8.35	781	444	911

17	2	16	17	2	15	1617.1	159.395	0.21	813	464	958
17	2	16	16	2	15	1602.5	159.395	7.73	787	446	915
17	3	15	18	3	16	1632.0	197.211	6.86	840	481	983
17	3	15	17	3	14	1616.8	197.211	0.40	854	489	999
17	3	15	16	3	14	1602.5	197.211	6.34	842	481	984
17	4	14	18	4	15	1632.0	249.841	5.21	818	457	949
17	4	14	17	4	13	1616.8	249.841	0.55	827	460	953
17	4	14	16	4	13	1602.5	249.841	4.80	824	460	952
17	5	13	18	5	14	1632.1	317.145	3.66	788	437	893
17	5	13	17	5	12	1616.8	317.145	0.62	801	442	905
17	5	13	16	5	12	1602.5	317.145	3.36	791	438	895
17	6	12	18	6	13	1632.1	398.852	2.38	738	415	836
17	6	12	17	6	11	1616.8	398.852	0.61	731	410	828
17	6	12	16	6	11	1602.5	398.852	2.18	743	417	840
17	7	11	18	7	12	1632.1	494.649	1.44	705	405	807
17	7	11	17	7	10	1616.8	494.649	0.52	714	409	814
17	7	11	16	7	10	1602.5	494.649	1.30	710	406	811
17	8	10	18	8	11	1632.1	604.185	0.80	686	400	795
17	8	10	17	8	9	1616.8	604.185	0.40	682	396	790
17	8	10	16	8	9	1602.5	604.185	0.72	693	402	801
17	9	9	18	9	10	1632.1	727.081	0.42	678	399	789
17	9	9	17	9	8	1616.8	727.081	0.28	687	402	798
17	9	9	16	9	8	1602.4	727.081	0.37	685	400	796
17	10	8	18	10	9	1632.1	862.941	0.20	672	398	787
17	10	8	17	10	7	1616.8	862.941	0.18	668	395	782
17	10	8	16	10	7	1602.4	862.941	0.18	681	400	795
18	0	18	19	0	19	1632.8	144.056	9.61	837	477	983
18	0	18	17	0	17	1601.7	144.056	8.93	839	477	983
18	1	17	19	1	18	1633.1	153.815	9.15	799	458	934
18	1	17	18	1	18	1612.9	153.815	0.05	786	450	917
18	1	17	17	1	16	1601.5	153.815	8.50	800	459	936
18	2	16	19	2	17	1632.9	174.832	8.20	858	491	1020
18	2	16	18	2	17	1616.6	174.832	0.19	833	477	983
18	2	16	17	2	15	1601.6	174.832	7.61	859	491	1019
18	3	15	19	3	16	1632.9	212.415	6.75	845	482	988
18	3	15	18	3	16	1616.8	212.415	0.35	828	475	970
18	3	15	17	3	14	1601.6	212.415	6.26	845	483	987
18	4	14	19	4	15	1632.9	265.043	5.14	855	476	985
18	4	14	18	4	15	1616.8	265.043	0.49	848	474	980
18	4	14	17	4	13	1601.6	265.043	4.75	857	477	985
18	5	13	19	5	14	1632.9	332.351	3.63	785	436	893
18	5	13	18	5	14	1616.8	332.351	0.55	775	431	881
18	5	13	17	5	12	1601.6	332.351	3.34	789	437	894
18	6	12	19	6	13	1632.9	414.066	2.37	735	413	834
18	6	12	18	6	13	1616.8	414.066	0.53	743	419	841
18	6	12	17	6	11	1601.6	414.066	2.17	738	415	836
18	7	11	19	7	12	1632.9	509.872	1.44	700	402	802
18	7	11	18	7	12	1616.8	509.872	0.46	694	399	796
18	7	11	17	7	10	1601.6	509.872	1.31	705	405	807
18	8	10	19	8	11	1632.9	619.418	0.81	680	397	789
18	8	10	18	8	11	1616.8	619.418	0.35	688	402	797
18	8	10	17	8	9	1601.6	619.418	0.73	686	400	795
18	9	9	19	9	10	1632.9	742.326	0.42	670	395	783
18	9	9	18	9	10	1616.8	742.326	0.25	667	393	778

18	9	9	17	9	8	1601.6	742.326	0.38	678	399	789
18	10	8	19	10	9	1633.0	878.199	0.21	665	395	781
18	10	8	18	10	9	1616.8	878.199	0.16	675	400	790
18	10	8	17	10	7	1601.6	878.199	0.18	672	398	787
19	1	19	20	1	20	1633.5	165.647	9.10	788	453	921
19	1	19	19	1	18	1621.2	165.647	0.05	803	462	939
19	1	19	18	1	18	1601.0	165.647	8.47	791	454	923
19	2	18	20	2	19	1633.7	190.599	8.02	772	439	906
19	2	18	19	2	17	1617.2	190.599	0.16	807	462	957
19	2	18	18	2	17	1600.8	190.599	7.45	777	441	909
19	3	17	20	3	18	1633.7	228.454	6.60	837	479	980
19	3	17	19	3	16	1616.9	228.454	0.31	852	486	997
19	3	17	18	3	16	1600.8	228.454	6.13	838	480	981
19	4	16	20	4	17	1633.7	281.089	5.04	811	453	944
19	4	16	19	4	15	1616.8	281.089	0.43	822	457	952
19	4	16	18	4	15	1600.8	281.089	4.67	815	456	947
19	5	15	20	5	16	1633.7	348.403	3.56	782	434	892
19	5	15	19	5	14	1616.8	348.403	0.48	793	439	902
19	5	15	18	5	14	1600.8	348.403	3.29	784	435	892
19	6	14	20	6	15	1633.7	430.125	2.34	732	412	833
19	6	14	19	6	13	1616.8	430.125	0.47	725	407	824
19	6	14	18	6	13	1600.8	430.125	2.15	735	413	834
19	7	13	20	7	14	1633.8	525.939	1.42	697	400	799
19	7	13	19	7	12	1616.8	525.939	0.40	704	404	806
19	7	13	18	7	12	1600.8	525.939	1.30	700	402	802
19	8	12	20	8	13	1633.8	635.497	0.81	674	394	784
19	8	12	19	8	11	1616.8	635.497	0.31	670	392	778
19	8	12	18	8	11	1600.8	635.497	0.73	680	397	789
19	9	11	20	9	12	1633.8	758.417	0.42	664	393	778
19	9	11	19	9	10	1616.8	758.417	0.22	671	397	785
19	9	11	18	9	10	1600.8	758.417	0.38	670	395	783
19	10	10	20	10	11	1633.8	894.304	0.21	658	392	776
19	10	10	19	10	9	1616.8	894.304	0.14	655	390	770
19	10	10	18	10	9	1600.7	894.304	0.19	665	395	781
20	0	20	21	0	21	1634.5	176.830	9.09	834	475	984
20	0	20	19	0	19	1600.0	176.830	8.47	835	476	983
20	1	19	21	1	20	1634.8	187.137	8.63	800	457	937
20	1	19	20	1	20	1612.0	187.137	0.04	784	449	915
20	1	19	19	1	18	1599.8	187.137	8.04	799	458	935
20	2	18	21	2	19	1634.6	207.849	7.76	856	490	1024
20	2	18	20	2	19	1616.5	207.849	0.14	827	474	981
20	2	18	19	2	17	1599.9	207.849	7.23	856	490	1021
20	3	17	21	3	18	1634.6	245.350	6.41	847	481	995
20	3	17	20	3	18	1616.8	245.350	0.27	830	474	973
20	3	17	19	3	16	1600.0	245.350	5.96	846	482	991
20	4	16	21	4	17	1634.6	297.979	4.90	851	473	986
20	4	16	20	4	17	1616.8	297.979	0.37	842	470	978
20	4	16	19	4	15	1600.0	297.979	4.55	852	474	985
20	5	15	21	5	16	1634.6	365.298	3.47	782	433	894
20	5	15	20	5	16	1616.8	365.298	0.42	771	429	882
20	5	15	19	5	14	1600.0	365.298	3.22	784	435	894
20	6	14	21	6	15	1634.6	447.027	2.28	730	410	833
20	6	14	20	6	15	1616.8	447.027	0.41	737	415	840
20	6	14	19	6	13	1599.9	447.027	2.11	732	412	833

20	7	13	21	7	14	1634.6	542.852	1.40	693	397	797
20	7	13	20	7	14	1616.8	542.852	0.35	688	395	790
20	7	13	19	7	12	1599.9	542.852	1.28	697	400	799
20	8	12	21	8	13	1634.6	652.420	0.79	670	393	781
20	8	12	20	8	13	1616.8	652.420	0.27	677	397	787
20	8	12	19	8	11	1599.9	652.420	0.73	674	394	784
20	9	11	21	9	12	1634.6	775.354	0.42	658	391	775
20	9	11	20	9	12	1616.8	775.354	0.19	655	389	769
20	9	11	19	9	10	1599.9	775.354	0.38	664	393	778
20	10	10	21	10	11	1634.6	911.255	0.21	653	390	773
20	10	10	20	10	11	1616.8	911.255	0.12	661	394	780
20	10	10	19	10	9	1599.9	911.255	0.19	658	392	776
21	1	21	22	1	22	1635.1	199.726	8.52	786	451	918
21	1	21	21	1	20	1622.2	199.726	0.04	802	460	939
21	1	21	20	1	20	1599.4	199.726	7.95	787	452	919
21	2	20	22	2	21	1635.4	225.169	7.49	764	435	902
21	2	20	21	2	19	1617.3	225.169	0.12	804	460	959
21	2	20	20	2	19	1599.1	225.169	6.99	768	437	904
21	3	19	22	3	20	1635.4	263.073	6.18	837	478	982
21	3	19	21	3	18	1616.9	263.073	0.24	852	485	1001
21	3	19	20	3	18	1599.1	263.073	5.76	836	478	980
21	4	18	22	4	19	1635.4	315.713	4.73	805	451	941
21	4	18	21	4	17	1616.8	315.713	0.33	818	455	952
21	4	18	20	4	17	1599.1	315.713	4.40	808	452	943
21	5	17	22	5	18	1635.4	383.037	3.36	779	432	892
21	5	17	21	5	16	1616.8	383.037	0.37	789	437	902
21	5	17	20	5	16	1599.1	383.037	3.12	779	433	892
21	6	16	22	6	17	1635.4	464.774	2.22	728	409	835
21	6	16	21	6	15	1616.8	464.774	0.36	721	404	826
21	6	16	20	6	15	1599.1	464.774	2.05	730	410	834
21	7	15	22	7	16	1635.4	560.609	1.36	692	396	797
21	7	15	21	7	14	1616.8	560.609	0.31	697	399	802
21	7	15	20	7	14	1599.1	560.609	1.25	693	397	797
21	8	14	22	8	15	1635.5	670.189	0.78	666	391	779
21	8	14	21	8	13	1616.8	670.189	0.24	662	389	773
21	8	14	20	8	13	1599.1	670.189	0.71	670	393	781
21	9	13	22	9	14	1635.5	793.136	0.41	654	389	773
21	9	13	21	9	12	1616.8	793.136	0.17	660	392	778
21	9	13	20	9	12	1599.1	793.136	0.38	658	391	775
21	10	12	22	10	13	1635.5	929.053	0.20	649	388	770
21	10	12	21	10	11	1616.8	929.053	0.11	645	386	764
21	10	12	20	10	11	1599.0	929.053	0.19	653	390	773
22	0	22	23	0	23	1636.1	212.932	8.38	834	473	989
22	0	22	21	0	21	1598.4	212.932	7.83	833	474	986
22	1	21	23	1	22	1636.5	223.862	7.94	804	456	945
22	1	21	22	1	22	1611.0	223.862	0.03	786	448	919
22	1	21	21	1	20	1598.1	223.862	7.41	802	456	941
22	2	20	23	2	21	1636.3	244.270	7.16	857	489	1030
22	2	20	22	2	21	1616.3	244.270	0.11	824	471	983
22	2	20	21	2	19	1598.2	244.270	6.68	856	489	1027
22	3	19	23	3	20	1636.3	281.663	5.92	849	480	1004
22	3	19	22	3	20	1616.8	281.663	0.21	833	473	980
22	3	19	21	3	18	1598.3	281.663	5.53	849	481	1000
22	4	18	23	4	19	1636.3	334.291	4.54	848	472	986

22	4	18	22	4	19	1616.8	334.291	0.29	838	467	977
22	4	18	21	4	17	1598.3	334.291	4.23	849	472	985
22	5	17	23	5	18	1636.3	401.620	3.23	781	432	894
22	5	17	22	5	18	1616.8	401.620	0.32	771	427	883
22	5	17	21	5	16	1598.3	401.620	3.00	782	433	894
22	6	16	23	6	17	1636.3	483.366	2.13	727	407	836
22	6	16	22	6	17	1616.8	483.366	0.32	734	411	842
22	6	16	21	6	15	1598.3	483.366	1.98	728	409	834
22	7	15	23	7	16	1636.3	579.211	1.31	690	394	797
22	7	15	22	7	16	1616.8	579.211	0.27	685	392	790
22	7	15	21	7	14	1598.2	579.211	1.21	692	396	797
22	8	14	23	8	15	1636.3	688.803	0.75	664	389	778
22	8	14	22	8	15	1616.8	688.803	0.21	670	392	783
22	8	14	21	8	13	1598.2	688.803	0.69	666	391	779
22	9	13	23	9	14	1636.3	811.764	0.40	651	387	771
22	9	13	22	9	14	1616.8	811.764	0.15	648	385	766
22	9	13	21	9	12	1598.2	811.764	0.37	654	389	773
22	10	12	23	10	13	1636.3	947.697	0.20	645	386	768
22	10	12	22	10	13	1616.8	947.697	0.09	651	390	774
22	10	12	21	10	11	1598.2	947.697	0.18	649	388	770
23	1	23	24	1	24	1636.8	237.119	7.77	787	450	919
23	1	23	23	1	22	1623.2	237.119	0.03	804	457	943
23	1	23	22	1	22	1597.7	237.119	7.27	786	450	918
23	2	22	24	2	23	1637.1	263.100	6.83	758	431	899
23	2	22	23	2	21	1617.5	263.100	0.09	804	458	961
23	2	22	22	2	21	1597.5	263.100	6.38	761	433	901
23	3	21	24	3	22	1637.1	301.069	5.64	840	478	986
23	3	21	23	3	20	1616.9	301.069	0.18	854	484	1007
23	3	21	22	3	20	1597.4	301.069	5.27	838	478	983
23	4	20	24	4	21	1637.1	353.712	4.33	802	448	938
23	4	20	23	4	19	1616.8	353.712	0.25	816	454	951
23	4	20	22	4	19	1597.4	353.712	4.04	804	450	940
23	5	19	24	5	20	1637.1	421.047	3.08	779	430	892
23	5	19	23	5	18	1616.8	421.047	0.28	788	435	902
23	5	19	22	5	18	1597.4	421.047	2.87	778	431	892
23	6	18	24	6	19	1637.1	502.801	2.04	727	406	837
23	6	18	23	6	17	1616.8	502.801	0.27	720	403	829
23	6	18	22	6	17	1597.4	502.801	1.90	728	407	836
23	7	17	24	7	18	1637.1	598.657	1.26	690	393	798
23	7	17	23	7	16	1616.8	598.657	0.24	694	396	802
23	7	17	22	7	16	1597.4	598.657	1.17	690	394	797
23	8	16	24	8	17	1637.1	708.262	0.72	663	387	777
23	8	16	23	8	15	1616.8	708.262	0.18	658	385	771
23	8	16	22	8	15	1597.4	708.262	0.67	664	389	778
23	9	15	24	9	16	1637.2	831.238	0.39	649	385	769
23	9	15	23	9	14	1616.8	831.238	0.13	653	388	774
23	9	15	22	9	14	1597.4	831.238	0.36	651	387	771
23	10	14	24	10	15	1637.2	967.188	0.19	643	384	766
23	10	14	23	10	13	1616.8	967.188	0.08	639	383	760
23	10	14	22	10	13	1597.4	967.188	0.18	645	386	768
24	0	24	25	0	25	1637.8	252.353	7.54	836	473	994
24	0	24	23	0	23	1596.7	252.353	7.06	834	473	992
24	1	23	25	1	24	1638.2	263.987	7.13	808	453	955
24	1	23	24	1	24	1609.9	263.987	0.02	789	447	926

24	1	23	23	1	22	1 596.4	263.987	6.67	807	455	950
24	2	22	25	2	23	1 638.0	284.102	6.44	859	489	1031
24	2	22	24	2	23	1 616.1	284.102	0.08	822	470	983
24	2	22	23	2	21	1 596.5	284.102	6.02	857	488	1031
24	3	21	25	3	22	1 638.0	321.354	5.34	850	477	1012
24	3	21	24	3	22	1 616.8	321.354	0.16	835	472	988
24	3	21	23	3	20	1 596.6	321.354	4.99	850	479	1009
24	4	20	25	4	21	1 638.0	373.977	4.10	847	471	985
24	4	20	24	4	21	1 616.8	373.977	0.22	835	465	974
24	4	20	23	4	19	1 596.6	373.977	3.83	847	471	985
24	5	19	25	5	20	1 638.0	441.317	2.93	783	431	897
24	5	19	24	5	20	1 616.8	441.317	0.25	772	426	885
24	5	19	23	5	18	1 596.6	441.317	2.73	782	431	895
24	6	18	25	6	19	1 638.0	523.080	1.94	727	405	838
24	6	18	24	6	19	1 616.8	523.080	0.24	733	408	844
24	6	18	23	6	17	1 596.6	523.080	1.81	727	406	837
24	7	17	25	7	18	1 638.0	618.947	1.20	690	391	799
24	7	17	24	7	18	1 616.8	618.947	0.21	684	389	792
24	7	17	23	7	16	1 596.6	618.947	1.11	690	393	798
24	8	16	25	8	17	1 638.0	728.566	0.69	662	386	777
24	8	16	24	8	17	1 616.8	728.566	0.16	666	388	782
24	8	16	23	8	15	1 596.5	728.566	0.64	663	387	777
24	9	15	25	9	16	1 638.0	851.557	0.37	647	383	768
24	9	15	24	9	16	1 616.8	851.557	0.11	643	382	762
24	9	15	23	9	14	1 596.5	851.557	0.34	649	385	769
24	10	14	25	10	15	1 638.0	987.524	0.19	640	383	765
24	10	14	24	10	15	1 616.8	987.524	0.07	645	386	770
24	10	14	23	10	13	1 596.5	987.524	0.17	643	384	766
25	1	25	26	1	26	1 638.4	277.821	6.94	790	448	923
25	1	25	25	1	24	1 624.3	277.821	0.02	807	455	950
25	1	25	24	1	24	1 596.1	277.821	6.50	788	449	921
25	2	24	26	2	25	1 638.7	304.390	6.08	755	429	897
25	2	24	25	2	23	1 617.8	304.390	0.07	805	458	962
25	2	24	24	2	23	1 595.8	304.390	5.69	757	430	898
25	3	23	26	3	24	1 638.8	342.438	5.03	844	477	993
25	3	23	25	3	22	1 616.9	342.438	0.14	855	482	1012
25	3	23	24	3	22	1 595.7	342.438	4.70	842	478	989
25	4	22	26	4	23	1 638.8	395.085	3.87	801	447	938
25	4	22	25	4	21	1 616.8	395.085	0.19	816	454	953
25	4	22	24	4	21	1 595.7	395.085	3.61	802	448	938
25	5	21	26	5	22	1 638.8	462.431	2.76	779	429	894
25	5	21	25	5	20	1 616.8	462.431	0.21	788	434	903
25	5	21	24	5	20	1 595.7	462.431	2.58	779	429	893
25	6	20	26	6	21	1 638.8	544.203	1.83	727	404	840
25	6	20	25	6	19	1 616.8	544.203	0.21	720	401	831
25	6	20	24	6	19	1 595.7	544.203	1.71	727	405	838
25	7	19	26	7	20	1 638.8	640.081	1.13	690	390	801
25	7	19	25	7	18	1 616.8	640.081	0.18	695	393	805
25	7	19	24	7	18	1 595.7	640.081	1.06	690	391	799
25	8	18	26	8	19	1 638.8	749.714	0.65	662	384	778
25	8	18	25	8	17	1 616.8	749.714	0.14	657	383	771
25	8	18	24	8	17	1 595.7	749.714	0.61	662	386	777
25	9	17	26	9	18	1 638.9	872.721	0.35	646	382	768
25	9	17	25	9	16	1 616.8	872.721	0.10	651	385	772

25	9	17	24	9	16	1595.7	872.721	0.33	647	383	768
25	10	16	26	10	17	1638.9	1008.706	0.18	638	382	764
25	10	16	25	10	15	1616.8	1008.706	0.06	634	380	759
25	10	16	24	10	15	1595.7	1008.706	0.16	640	383	765
26	0	26	27	0	27	1639.5	295.084	6.64	838	472	996
26	0	26	25	0	25	1595.1	295.084	6.22	837	472	996
26	1	25	27	1	26	1639.9	307.507	6.25	810	451	964
26	1	25	26	1	26	1608.8	307.507	0.02	793	445	934
26	1	25	25	1	24	1594.7	307.507	5.86	810	453	961
26	2	24	27	2	25	1639.8	327.348	5.66	860	488	1027
26	2	24	26	2	25	1615.8	327.348	0.06	821	468	980
26	2	24	25	2	23	1594.8	327.348	5.30	859	488	1029
26	3	23	27	3	24	1639.6	364.425	4.71	846	474	1013
26	3	23	26	3	24	1616.8	364.425	0.12	837	470	994
26	3	23	25	3	22	1594.9	364.425	4.40	849	476	1014
26	4	22	27	4	23	1639.6	417.038	3.62	847	471	986
26	4	22	26	4	23	1616.8	417.038	0.16	835	464	974
26	4	22	25	4	21	1594.9	417.038	3.39	847	471	986
26	5	21	27	5	22	1639.6	484.388	2.59	784	430	899
26	5	21	26	5	22	1616.8	484.388	0.18	774	426	888
26	5	21	25	5	20	1594.9	484.388	2.42	783	431	898
26	6	20	27	6	21	1639.7	566.169	1.72	727	404	840
26	6	20	26	6	21	1616.8	566.169	0.18	733	407	846
26	6	20	25	6	19	1594.9	566.169	1.61	727	404	839
26	7	19	27	7	20	1639.7	662.059	1.07	651	390	802
26	7	19	26	7	20	1616.8	662.059	0.15	685	388	795
26	7	19	25	7	18	1594.9	662.059	0.99	690	390	801
26	8	18	27	8	19	1639.7	771.707	0.62	663	384	778
26	8	18	26	8	19	1616.8	771.707	0.12	666	386	783
26	8	18	25	8	17	1594.9	771.707	0.57	662	384	778
26	9	17	27	9	18	1639.7	894.730	0.33	645	381	767
26	9	17	26	9	18	1616.8	894.730	0.08	641	380	762
26	9	17	25	9	16	1594.8	894.730	0.31	646	382	768
26	10	16	27	10	17	1639.7	1030.734	0.17	636	381	763
26	10	16	26	10	17	1616.8	1030.734	0.05	640	383	768
26	10	16	25	10	15	1594.8	1030.734	0.16	638	382	764
27	1	27	28	1	28	1640.1	321.829	6.06	793	447	929
27	1	27	27	1	26	1625.6	321.829	0.02	808	453	955
27	1	27	26	1	26	1594.4	321.829	5.68	791	448	926
27	2	26	28	2	27	1640.4	349.036	5.30	752	428	894
27	2	26	27	2	25	1618.1	349.036	0.05	804	457	959
27	2	26	26	2	25	1594.1	349.036	4.56	754	429	896
27	3	25	28	3	26	1640.5	387.182	4.38	847	475	1001
27	3	25	27	3	24	1616.9	387.182	0.10	854	480	1015
27	3	25	26	3	24	1594.1	387.182	4.10	845	476	997
27	4	24	28	4	25	1640.5	439.832	3.37	799	446	938
27	4	24	27	4	23	1616.8	439.832	0.14	816	453	953
27	4	24	26	4	23	1594.1	439.832	3.16	800	447	938
27	5	23	28	5	24	1640.5	507.188	2.41	780	428	895
27	5	23	27	5	22	1616.8	507.188	0.16	789	433	904
27	5	23	26	5	22	1594.0	507.188	2.26	779	429	894
27	6	22	28	6	23	1640.5	588.978	1.61	727	403	841
27	6	22	27	6	21	1616.8	588.978	0.16	721	400	834
27	6	22	26	6	21	1594.0	588.978	1.50	727	404	841

27	7	21	28	7	22	1640.5	684.881	1.00	692	389	804
27	7	21	27	7	20	1616.8	684.881	0.13	696	391	808
27	7	21	26	7	20	1594.0	684.881	0.93	691	390	802
27	8	20	28	8	21	1640.5	794.543	0.58	663	383	778
27	8	20	27	8	19	1616.8	794.543	0.10	658	381	772
27	8	20	26	8	19	1594.0	794.543	0.54	663	384	778
27	9	19	28	9	20	1640.5	917.584	0.31	644	380	767
27	9	19	27	9	18	1616.8	917.584	0.07	648	382	772
27	9	19	26	9	18	1594.0	917.584	0.29	645	381	767
27	10	18	28	10	19	1640.6	1053.608	0.16	635	379	763
27	10	18	27	10	17	1616.8	1053.608	0.05	630	378	758
27	10	18	26	10	17	1594.0	1053.608	0.15	636	381	763
26	0	28	29	0	29	1641.1	341.117	5.73	838	472	993
26	0	28	27	0	27	1593.4	341.117	5.37	838	472	995
28	1	27	29	1	28	1641.6	354.417	5.37	808	449	963
28	1	27	28	1	28	1607.5	354.417	0.01	794	444	939
28	1	27	27	1	26	1593.0	354.417	5.03	810	450	965
26	2	26	29	2	27	1641.5	374.011	4.87	858	488	1020
28	2	26	28	2	27	1615.5	374.011	0.04	819	467	975
28	2	26	27	2	25	1593.1	374.011	4.56	859	488	1023
26	3	25	29	3	26	1641.3	410.875	4.06	840	471	1006
28	3	25	28	3	26	1616.8	410.875	0.09	835	468	995
26	3	25	27	3	24	1593.2	410.875	3.80	843	473	1010
28	4	24	29	4	25	1641.3	463.471	3.13	847	471	987
26	4	24	28	4	25	1616.8	463.471	0.12	833	463	973
28	4	24	27	4	23	1593.2	463.471	2.93	847	471	986
28	5	23	29	5	24	1641.3	530.832	2.24	786	431	900
26	5	23	28	5	24	1616.8	530.832	0.14	775	426	890
28	5	23	27	5	22	1593.2	530.832	2.09	785	430	900
26	6	22	29	6	23	1641.3	612.631	1.49	728	403	842
28	6	22	28	6	23	1616.8	612.631	0.13	733	406	847
28	6	22	27	6	21	1593.2	612.631	1.39	727	404	841
26	7	21	29	7	22	1641.4	708.547	0.93	692	389	804
28	7	21	28	7	22	1616.8	708.547	0.11	686	387	798
26	7	21	27	7	20	1593.2	708.547	0.86	692	389	804
28	8	20	29	8	21	1641.4	818.224	0.54	664	382	779
28	8	20	28	8	21	1616.8	818.224	0.09	668	384	783
28	8	20	27	8	19	1593.2	818.224	0.50	663	383	778
28	9	19	29	9	20	1641.4	941.283	0.29	644	379	768
26	9	19	28	9	20	1616.8	941.283	0.06	640	378	762
28	9	19	27	9	18	1593.1	941.283	0.27	644	380	767
26	10	18	29	10	19	1641.4	1077.327	0.15	634	379	763
28	10	18	28	10	19	1616.8	1077.327	0.04	638	381	767
28	10	18	27	10	17	1593.1	1077.327	0.14	635	379	763
29	1	29	30	1	30	1641.7	369.141	5.18	796	445	937
29	1	29	29	1	28	1626.8	369.141	0.01	808	451	957
29	1	29	28	1	28	1592.8	369.141	4.86	794	446	934
29	2	28	30	2	29	1642.1	397.035	4.52	751	427	891
29	2	28	29	2	27	1618.4	397.035	0.04	803	456	955
29	2	28	28	2	27	1592.4	397.035	4.23	752	427	893
29	3	27	30	3	28	1642.2	435.299	3.74	847	473	1006
29	3	27	29	3	26	1616.9	435.299	0.08	851	477	1014
29	3	27	28	3	26	1592.4	435.299	3.50	847	474	1003
29	4	26	30	4	27	1642.2	487.952	2.88	799	446	938

29	4	26	29	4	25	1616.8	487.952	0.10	817	454	955
29	4	26	28	4	25	1592.4	487.952	2.70	799	446	938
29	5	25	30	5	26	1642.2	555.318	2.06	780	428	895
29	5	25	29	5	24	1616.8	555.318	0.12	790	433	904
29	5	25	28	5	24	1592.4	555.318	1.93	780	428	895
29	6	24	30	6	25	1642.2	637.127	1.38	728	403	842
29	6	24	29	6	23	1616.8	637.127	0.11	722	400	835
29	6	24	28	6	23	1592.4	637.127	1.29	728	403	842
29	7	23	30	7	24	1642.2	733.055	0.86	693	388	805
29	7	23	29	7	22	1616.8	733.055	0.10	697	390	810
29	7	23	28	7	22	1592.3	733.055	0.80	692	389	804
29	8	22	30	8	23	1642.2	842.749	0.50	664	381	780
29	8	22	29	8	21	1616.8	842.749	0.08	659	380	774
29	8	22	28	8	21	1592.3	842.749	0.46	664	382	779
29	9	21	30	9	22	1642.2	965.826	0.27	644	379	767
29	9	21	29	9	20	1616.8	965.826	0.05	648	381	772
29	9	21	28	9	20	1592.3	965.826	0.25	644	379	768
29	10	20	30	10	21	1642.3	1101.891	0.14	634	378	762
29	10	20	29	10	19	1616.8	1101.891	0.03	629	376	757
29	10	20	28	10	19	1592.3	1101.891	0.13	634	379	763
30	0	30	31	0	31	1642.7	390.443	4.84	835	472	986
30	0	30	29	0	29	1591.8	390.443	4.54	836	472	989
30	1	29	31	1	30	1643.3	404.711	4.52	805	447	955
30	1	29	30	1	30	1606.2	404.711	0.01	794	442	939
30	1	29	29	1	28	1591.3	404.711	4.23	806	448	960
30	2	28	31	2	29	1643.2	424.097	4.10	855	488	1012
30	2	28	30	2	29	1615.0	424.097	0.03	817	465	969
30	2	28	29	2	27	1591.4	424.097	3.84	856	488	1015
30	3	27	31	3	28	1643.0	460.705	3.42	838	470	1001
30	3	27	30	3	28	1616.8	460.705	0.06	835	466	995
30	3	27	29	3	26	1591.5	460.705	3.21	839	470	1003
30	4	26	31	4	27	1643.0	513.278	2.64	848	472	988
30	4	26	30	4	27	1616.8	513.278	0.09	833	464	973
30	4	26	29	4	25	1591.5	513.278	2.47	847	472	987
30	5	25	31	5	26	1643.0	580.647	1.89	788	431	902
30	5	25	30	5	26	1616.8	580.647	0.10	776	426	891
30	5	25	29	5	24	1591.5	580.647	1.77	787	431	901
30	6	24	31	6	25	1643.0	662.466	1.26	729	404	841
30	6	24	30	6	25	1616.8	662.466	0.10	734	406	847
30	6	24	29	6	23	1591.5	662.466	1.18	728	403	842
30	7	23	31	7	24	1643.0	758.407	0.79	694	388	805
30	7	23	30	7	24	1616.8	758.407	0.08	688	386	800
30	7	23	29	7	22	1591.5	758.407	0.73	693	388	805
30	8	22	31	8	23	1643.1	868.117	0.46	666	381	780
30	8	22	30	8	23	1616.8	868.117	0.07	669	383	784
30	8	22	29	8	21	1591.5	868.117	0.43	664	381	780
30	9	21	31	9	22	1643.1	991.213	0.25	644	378	767
30	9	21	30	9	22	1616.8	991.213	0.05	640	377	762
30	9	21	29	9	20	1591.5	991.213	0.23	644	379	767
30	10	20	31	10	21	1643.1	1127.300	0.13	634	377	762
30	10	20	30	10	21	1616.8	1127.300	0.03	637	379	766
30	10	20	29	10	19	1591.4	1127.300	0.12	634	378	762
31	1	31	32	1	32	1643.4	419.752	4.34	797	444	943
31	1	31	31	1	30	1628.2	419.752	0.01	807	449	956

31	1	31	30	1	30	1591.1	419.752	4.07	797	444	940
31	2	30	32	2	31	1643.8	448.382	3.77	751	426	887
31	2	30	31	2	29	1618.9	448.382	0.03	802	456	950
31	2	30	30	2	29	1590.8	448.382	3.53	751	426	890
31	3	29	32	3	30	1643.9	486.787	3.12	847	471	1007
31	3	29	31	3	28	1616.9	486.787	0.05	850	475	1013
31	3	29	30	3	28	1590.7	486.787	2.92	847	472	1007
31	4	28	32	4	29	1643.9	539.443	2.41	800	446	936
31	4	28	31	4	27	1616.8	539.443	0.08	817	455	955
31	4	28	30	4	27	1590.7	539.443	2.26	799	446	937
31	5	27	32	5	28	1643.9	606.818	1.73	782	428	894
31	5	27	31	5	26	1616.8	606.818	0.09	792	433	904
31	5	27	30	5	26	1590.7	606.818	1.62	781	428	895
31	6	26	32	6	27	1643.9	688.647	1.15	730	404	840
31	6	26	31	6	25	1616.8	688.647	0.08	724	401	835
31	6	26	30	6	25	1590.7	688.647	1.08	729	403	841
31	7	25	32	7	26	1643.9	784.602	0.72	695	388	806
31	7	25	31	7	24	1616.8	784.602	0.07	700	390	809
31	7	25	30	7	24	1590.7	784.602	0.67	694	388	805
31	8	24	32	8	25	1643.9	894.329	0.42	667	381	780
31	8	24	31	8	23	1616.8	894.329	0.06	661	379	775
31	8	24	30	8	23	1590.6	894.329	0.39	666	381	780
31	9	23	32	9	24	1643.9	1017.445	0.23	645	377	766
31	9	23	31	9	22	1616.8	1017.445	0.04	648	379	770
31	9	23	30	9	22	1590.6	1017.445	0.21	644	378	767
31	10	22	32	10	23	1643.9	1153.553	0.12	634	376	760
31	10	22	31	10	21	1616.8	1153.553	0.03	630	375	757
31	10	22	30	10	21	1590.6	1153.553	0.11	634	377	762
32	0	32	33	0	33	1644.4	443.054	4.01	831	470	977
32	0	32	31	0	31	1590.1	443.054	3.76	833	471	981
32	1	31	33	1	32	1644.9	458.383	3.72	804	446	950
32	1	31	32	1	32	1604.8	458.383	0.01	794	441	940
32	1	31	31	1	30	1589.6	458.383	3.49	804	447	952
32	2	30	33	2	31	1644.9	477.605	3.38	853	487	1004
32	2	30	32	2	31	1614.6	477.605	0.02	815	465	963
32	2	30	31	2	29	1589.7	477.605	3.17	854	487	1008
32	3	29	33	3	30	1644.7	513.916	2.83	838	468	999
32	3	29	32	3	30	1616.7	513.916	0.05	834	464	994
32	3	29	31	3	28	1589.8	513.916	2.65	838	469	1000
32	4	28	33	4	29	1644.7	566.455	2.19	850	474	989
32	4	28	32	4	29	1616.8	566.455	0.06	833	465	972
32	4	28	31	4	27	1589.8	566.455	2.05	848	473	988
32	5	27	33	5	28	1644.7	633.832	1.57	791	432	902
32	5	27	32	5	28	1616.8	633.832	0.07	779	426	891
32	5	27	31	5	26	1589.8	633.832	1.47	789	431	902
32	6	26	33	6	27	1644.7	715.670	1.05	731	404	839
32	6	26	32	6	27	1616.8	715.670	0.07	735	406	844
32	6	26	31	6	25	1589.8	715.670	0.98	730	404	840
32	7	25	33	7	26	1644.7	811.640	0.65	696	388	805
32	7	25	32	7	26	1616.8	811.640	0.06	691	386	801
32	7	25	31	7	24	1589.8	811.640	0.61	695	388	806
32	8	24	33	8	25	1644.7	921.383	0.38	668	380	780
32	8	24	32	8	25	1616.8	921.383	0.05	671	382	783
32	8	24	31	8	23	1589.8	921.383	0.36	667	381	780

32	9	23	33	9	24	1644.8	1044.520	0.21	647	377	765
32	9	23	32	9	24	1616.8	1044.520	0.03	642	376	761
32	9	23	31	9	22	1589.8	1044.520	0.19	645	377	766
32	10	22	33	10	23	1644.8	1180.651	0.11	634	376	759
32	10	22	32	10	23	1616.8	1180.651	0.02	637	377	763
32	10	22	31	10	21	1589.7	1180.651	0.10	634	376	760
33	1	33	34	1	34	1645.0	473.660	3.56	797	441	944
33	1	33	33	1	32	1629.7	473.660	0.01	807	447	954
33	1	33	32	1	32	1589.5	473.660	3.34	797	442	944
33	2	32	34	2	33	1645.4	503.075	3.09	752	426	885
33	2	32	33	2	31	1619.4	503.075	0.02	801	456	945
33	2	32	32	2	31	1589.1	503.075	2.89	751	426	886
33	3	31	34	3	32	1645.5	541.645	2.55	844	468	1005
33	3	31	33	3	30	1617.0	541.645	0.04	849	473	1012
33	3	31	32	3	30	1589.0	541.645	2.39	846	469	1007
33	4	30	34	4	31	1645.5	594.304	1.97	802	447	934
33	4	30	33	4	29	1616.8	594.304	0.06	820	456	954
33	4	30	32	4	29	1589.0	594.304	1.85	801	447	935
33	5	29	34	5	30	1645.5	661.688	1.42	783	428	894
33	5	29	33	5	28	1616.8	661.688	0.06	794	433	904
33	5	29	32	5	28	1589.0	661.688	1.33	783	428	894
33	6	28	34	6	29	1645.6	743.536	0.95	731	404	837
33	6	28	33	6	27	1616.8	743.536	0.06	726	401	833
33	6	28	32	6	27	1589.0	743.536	0.89	731	404	839
33	7	27	34	7	28	1645.6	839.520	0.59	696	388	804
33	7	27	33	7	26	1616.8	839.520	0.05	701	390	808
33	7	27	32	7	26	1589.0	839.520	0.55	696	388	805
33	8	26	34	8	27	1645.6	949.281	0.34	669	380	779
33	8	26	33	8	25	1616.8	949.281	0.04	665	378	775
33	8	26	32	8	25	1588.9	949.281	0.32	668	380	780
33	9	25	34	9	26	1645.6	1072.438	0.19	648	376	765
33	9	25	33	9	24	1616.8	1072.438	0.03	651	378	768
33	9	25	32	9	24	1588.9	1072.438	0.18	647	377	765
33	10	24	34	10	25	1645.6	1208.594	0.10	634	375	758
33	10	24	33	10	23	1616.8	1208.594	0.02	630	374	755
33	10	24	32	10	23	1588.9	1208.594	0.09	634	376	759
34	0	34	35	0	35	1646.0	498.942	3.25	825	468	968
34	0	34	33	0	33	1588.5	498.942	3.05	828	469	972
34	1	33	35	1	34	1646.6	515.426	3.00	806	446	949
34	1	33	34	1	34	1603.3	515.426	0.01	795	440	940
34	1	33	33	1	32	1587.9	515.426	2.81	805	446	949
34	2	32	35	2	33	1646.6	534.539	2.74	851	487	999
34	2	32	34	2	33	1614.0	534.539	0.02	814	465	958
34	2	32	33	2	31	1588.0	534.539	2.56	851	487	1001
34	3	31	35	3	32	1646.4	570.510	2.29	840	468	1002
34	3	31	34	3	32	1616.7	570.510	0.03	834	463	994
34	3	31	33	3	30	1588.1	570.510	2.15	838	468	1000
34	4	30	35	4	31	1646.4	623.002	1.77	854	476	989
34	4	30	34	4	31	1616.8	623.002	0.05	836	466	971
34	4	30	33	4	29	1588.2	623.002	1.66	851	475	988
34	5	29	35	5	30	1646.4	690.386	1.27	792	432	903
34	5	29	34	5	30	1616.8	690.386	0.05	781	427	892
34	5	29	33	5	28	1588.1	690.386	1.19	791	432	903
34	6	28	35	6	29	1646.4	772.244	0.85	732	404	835

34	6	28	34	6	29	1616.8	772.244	0.05	736	406	840
34	6	28	33	6	27	1588.1	772.244	0.80	732	404	837
34	7	27	35	7	28	1646.4	868.242	0.53	696	388	801
34	7	27	34	7	28	1616.8	868.242	0.04	692	386	798
34	7	27	33	7	26	1588.1	868.242	0.50	696	388	804
34	8	26	35	8	27	1646.4	978.022	0.31	671	379	777
34	8	26	34	8	27	1616.8	978.022	0.03	674	381	781
34	8	26	33	8	25	1588.1	978.022	0.29	669	380	779
34	9	25	35	9	26	1646.5	1101.200	0.17	649	376	763
34	9	25	34	9	26	1616.8	1101.200	0.02	644	375	760
34	9	25	33	9	24	1588.1	1101.200	0.16	648	376	765
34	10	24	35	10	25	1646.5	1237.380	0.09	635	374	756
34	10	24	34	10	25	1616.8	1237.380	0.02	637	376	760
34	10	24	33	10	23	1588.1	1237.380	0.08	634	375	758
35	1	35	36	1	36	1646.7	530.860	2.87	795	439	942
35	1	35	35	1	34	1631.2	530.860	0.00	807	446	954
35	1	35	34	1	34	1587.8	530.860	2.69	796	440	943
35	2	34	36	2	35	1647.1	561.108	2.48	755	427	884
35	2	34	35	2	33	1620.0	561.108	0.01	802	456	941
35	2	34	34	2	33	1587.4	561.108	2.32	753	427	884
35	3	33	36	3	34	1647.2	599.871	2.05	840	465	998
35	3	33	35	3	32	1617.1	599.871	0.03	848	471	1010
35	3	33	34	3	32	1587.3	599.871	1.92	842	467	1002
35	4	32	36	4	33	1647.2	652.534	1.58	805	449	933
35	4	32	35	4	31	1616.9	652.534	0.04	823	458	955
35	4	32	34	4	31	1587.3	652.534	1.48	804	448	934
35	5	31	36	5	32	1647.2	719.926	1.14	784	429	893
35	5	31	35	5	30	1616.8	719.926	0.04	795	433	904
35	5	31	34	5	30	1587.3	719.926	1.06	784	428	893
35	6	30	36	6	31	1647.2	801.794	0.76	731	403	833
35	6	30	35	6	29	1616.8	801.794	0.04	727	401	829
35	6	30	34	6	29	1587.3	801.794	0.71	732	404	835
35	7	29	36	7	30	1647.3	897.807	0.48	696	388	799
35	7	29	35	7	28	1616.8	897.807	0.04	700	389	803
35	7	29	34	7	28	1587.3	897.807	0.44	696	388	801
35	8	28	36	8	29	1647.3	1007.605	0.28	670	379	775
35	8	28	35	8	27	1616.8	1007.605	0.03	667	378	772
35	8	28	34	8	27	1587.3	1007.605	0.26	671	379	777
35	9	27	36	9	28	1647.3	1130.805	0.15	649	375	760
35	9	27	35	9	26	1616.8	1130.805	0.02	652	377	764
35	9	27	34	9	26	1587.2	1130.805	0.14	649	376	763
35	10	26	36	10	27	1647.3	1267.010	0.08	635	374	754
35	10	26	35	10	25	1616.8	1267.010	0.01	631	373	751
35	10	26	34	10	25	1587.2	1267.010	0.07	635	374	756
36	0	36	37	0	37	1647.7	558.102	2.59	820	466	960
36	0	36	35	0	35	1586.9	558.102	2.43	822	466	963
36	1	35	37	1	36	1648.3	575.833	2.38	810	446	953
36	1	35	36	1	36	1601.7	575.833	0.00	795	439	940
36	1	35	35	1	34	1586.2	575.833	2.23	808	446	950
36	2	34	37	2	35	1648.3	594.897	2.17	851	486	995
36	2	34	36	2	35	1613.3	594.897	0.01	814	464	953
36	2	34	35	2	33	1586.2	594.897	2.03	851	486	996
36	3	33	37	3	34	1648.1	630.487	1.82	843	468	1005
36	3	33	36	3	34	1616.6	630.487	0.02	834	462	993

36	3	33	35	3	32	1586.4	630.487	1.70	842	468	1004
36	4	32	37	4	33	1648.1	682.919	1.41	858	478	993
36	4	32	36	4	33	1616.8	682.919	0.03	839	467	971
36	4	32	35	4	31	1586.5	682.919	1.32	856	477	990
36	5	31	37	5	32	1648.1	750.307	1.01	793	433	904
36	5	31	36	5	32	1616.8	750.307	0.04	782	428	893
36	5	31	35	5	30	1586.5	750.307	0.95	792	433	903
36	6	30	37	6	31	1648.1	832.185	0.68	732	404	830
36	6	30	36	6	31	1616.8	832.185	0.04	736	407	835
36	6	30	35	6	29	1586.5	832.185	0.63	732	404	833
36	7	29	37	7	30	1648.1	928.213	0.42	695	388	797
36	7	29	36	7	30	1616.8	928.213	0.03	691	386	794
36	7	29	35	7	28	1586.4	928.213	0.40	696	388	799
36	8	28	37	8	29	1648.1	1038.030	0.25	670	379	773
36	8	28	36	8	29	1616.8	1038.030	0.02	674	380	777
36	8	28	35	8	27	1586.4	1038.030	0.23	670	379	775
36	9	27	37	9	28	1648.1	1161.253	0.14	650	375	758
36	9	27	36	9	28	1616.8	1161.253	0.02	646	373	756
36	9	27	35	9	26	1586.4	1161.253	0.13	649	375	760
36	10	26	37	10	27	1648.2	1297.483	0.07	635	373	751
36	10	26	36	10	27	1616.8	1297.483	0.01	638	375	755
36	10	26	35	10	25	1586.4	1297.483	0.06	635	374	754
37	1	37	38	1	38	1648.3	591.349	2.27	792	437	935
37	1	37	37	1	36	1632.8	591.349	0.00	807	445	954
37	1	37	36	1	36	1586.2	591.349	2.13	793	438	938
37	2	36	38	2	37	1648.8	622.477	1.95	758	428	882
37	2	36	37	2	35	1620.7	622.477	0.01	803	456	938
37	2	36	36	2	35	1585.7	622.477	1.83	756	428	883
37	3	35	38	3	36	1648.9	661.463	1.61	837	463	990
37	3	35	37	3	34	1617.1	661.463	0.02	847	470	1007
37	3	35	36	3	34	1585.6	661.463	1.51	838	464	994
37	4	34	38	4	35	1648.9	714.133	1.25	808	450	933
37	4	34	37	4	33	1616.9	714.133	0.03	828	460	958
37	4	34	36	4	33	1585.6	714.133	1.17	807	449	933
37	5	33	38	5	34	1648.9	781.529	0.90	784	429	894
37	5	33	37	5	32	1616.8	781.529	0.03	795	433	905
37	5	33	36	5	32	1585.6	781.529	0.84	784	429	894
37	6	32	38	6	33	1648.9	863.418	0.60	731	404	828
37	6	32	37	6	31	1616.8	863.418	0.03	727	401	825
37	6	32	36	6	31	1585.6	863.418	0.56	731	403	831
37	7	31	38	7	32	1648.9	959.461	0.38	695	388	793
37	7	31	37	7	30	1616.8	959.461	0.03	699	389	798
37	7	31	36	7	30	1585.6	959.461	0.35	695	388	797
37	8	30	38	8	31	1649.0	1069.298	0.22	670	378	770
37	8	30	37	8	29	1616.8	1069.298	0.02	666	377	768
37	8	30	36	8	29	1585.6	1069.298	0.20	670	379	773
37	9	29	38	9	30	1649.0	1192.543	0.12	650	374	756
37	9	29	37	9	28	1616.8	1192.543	0.01	653	375	760
37	9	29	36	9	28	1585.6	1192.543	0.11	650	375	758
37	10	28	38	10	29	1649.0	1328.800	0.06	635	373	748
37	10	28	37	10	27	1616.8	1328.800	0.01	631	372	746
37	10	28	36	10	27	1585.5	1328.800	0.06	635	373	751
38	0	38	39	0	39	1649.3	620.527	2.03	814	462	953
38	0	38	37	0	37	1585.2	620.527	1.90	817	464	956

3E	1	37	39	1	38	1650.0	639.595	1.85	814	447	959
3E	1	37	38	1	38	1600.1	639.595	0.00	796	439	941
3E	1	37	37	1	36	1584.5	639.595	1.73	812	447	957
3E	2	36	39	2	37	1650.0	658.680	1.69	853	486	995
3E	2	36	38	2	37	1612.6	658.680	0.01	816	464	952
3E	2	36	37	2	35	1584.5	658.680	1.58	852	486	994
3E	3	35	39	3	36	1649.8	693.849	1.42	844	469	999
3E	3	35	38	3	36	1616.5	693.849	0.02	833	462	988
3E	3	35	37	3	34	1584.7	693.849	1.33	844	469	1003
3E	4	34	39	4	35	1649.8	746.205	1.10	864	479	1002
3E	4	34	38	4	35	1616.8	746.205	0.02	843	468	975
3E	4	34	37	4	33	1584.8	746.205	1.03	861	478	997
3E	5	33	39	5	34	1649.8	813.593	0.79	793	433	907
3E	5	33	38	5	34	1616.8	813.593	0.03	783	428	895
3E	5	33	37	5	32	1584.8	813.593	0.74	793	433	906
3E	6	32	39	6	33	1649.8	895.492	0.53	732	405	826
3E	6	32	38	6	33	1616.8	895.492	0.03	735	407	830
3E	6	32	37	6	31	1584.8	895.492	0.50	732	404	828
3E	7	31	39	7	32	1649.8	991.551	0.33	694	387	790
3E	7	31	38	7	32	1616.8	991.551	0.02	691	386	788
3E	7	31	37	7	30	1584.8	991.551	0.31	695	388	793
3E	8	30	39	8	31	1649.8	1101.407	0.19	669	378	766
3E	8	30	38	8	31	1616.8	1101.407	0.02	673	379	771
3E	8	30	37	8	29	1584.7	1101.407	0.18	670	378	770
3E	9	29	39	9	30	1649.8	1224.676	0.11	650	373	752
3E	9	29	38	9	30	1616.8	1224.676	0.01	646	372	751
3E	9	29	37	9	28	1584.7	1224.676	0.10	650	374	756
3E	10	28	39	10	29	1649.8	1360.959	0.05	635	372	745
3E	10	28	38	10	29	1616.8	1360.959	0.01	637	373	749
3E	10	28	37	10	27	1584.7	1360.959	0.05	635	373	748
3E	1	39	40	1	40	1650.0	655.122	1.76	787	435	928
3E	1	39	39	1	38	1634.5	655.122	0.00	807	444	952
3E	1	39	38	1	38	1584.5	655.122	1.65	789	436	931
3E	2	38	40	2	39	1650.4	687.178	1.51	763	428	884
3E	2	38	39	2	37	1621.5	687.178	0.01	806	457	939
3E	2	38	38	2	37	1584.1	687.178	1.41	760	428	882
3E	3	37	40	3	38	1650.6	726.419	1.25	833	461	982
3E	3	37	39	3	36	1617.2	726.419	0.01	845	469	998
3E	3	37	38	3	36	1583.9	726.419	1.16	834	462	985
3E	4	36	40	4	37	1650.6	779.097	0.96	812	451	936
3E	4	36	39	4	35	1616.9	779.097	0.02	833	461	964
3E	4	36	38	4	35	1583.9	779.097	0.90	810	450	934
3E	5	35	40	5	36	1650.6	846.498	0.69	783	428	895
3E	5	35	39	5	34	1616.8	846.498	0.02	794	434	907
3E	5	35	38	5	34	1583.9	846.498	0.65	784	428	894
3E	6	34	40	6	35	1650.6	928.406	0.46	731	405	822
3E	6	34	39	6	33	1616.8	928.406	0.02	727	402	820
3E	6	34	38	6	33	1583.9	928.406	0.43	731	404	826
3E	7	33	40	7	34	1650.6	1024.481	0.29	694	387	785
3E	7	33	39	7	32	1616.8	1024.481	0.02	697	389	790
3E	7	33	38	7	32	1583.9	1024.481	0.27	694	387	790
3E	8	32	40	8	33	1650.6	1134.357	0.17	669	377	762
3E	8	32	39	8	31	1616.8	1134.357	0.01	665	376	761
3E	8	32	38	8	31	1583.9	1134.357	0.16	669	378	766

39	9	31	40	9	32	1650.7	1257.650	0.09	650	373	748
39	9	31	39	9	30	1616.8	1257.650	0.01	652	374	752
39	9	31	38	9	30	1583.9	1257.650	0.09	650	373	752
39	10	30	40	10	31	1650.7	1393.961	0.05	634	371	740
39	10	30	39	10	29	1616.8	1393.961	0.01	631	370	737
39	10	30	38	10	29	1583.8	1393.961	0.04	635	372	744
40	0	40	41	0	41	1650.9	686.212	1.56	809	459	948
40	0	40	39	0	39	1583.6	686.212	1.46	811	461	951
40	1	39	41	1	40	1651.7	706.704	1.41	816	449	956
40	1	39	40	1	40	1598.4	706.704	0.00	797	439	938
40	1	39	39	1	38	1582.9	706.704	1.32	816	448	959
40	2	38	41	2	39	1651.7	725.884	1.29	856	484	999
40	2	38	40	2	39	1611.7	725.884	0.01	819	463	954
40	2	38	39	2	37	1582.8	725.884	1.20	854	485	997
40	3	37	41	3	38	1651.5	760.598	1.08	839	469	987
40	3	37	40	3	38	1616.4	760.598	0.01	830	461	980
40	3	37	39	3	36	1583.0	760.598	1.01	842	469	994
40	4	36	41	4	37	1651.4	812.857	0.84	867	478	1010
40	4	36	40	4	37	1616.8	812.857	0.02	847	468	980
40	4	36	39	4	35	1583.1	812.857	0.79	866	478	1006
40	5	35	41	5	36	1651.4	880.244	0.61	793	433	907
40	5	35	40	5	36	1616.8	880.244	0.02	783	428	896
40	5	35	39	5	34	1583.1	880.244	0.57	793	433	908
40	6	34	41	6	35	1651.4	962.162	0.41	732	405	820
40	6	34	40	6	35	1616.8	962.162	0.02	735	407	824
40	6	34	39	6	33	1583.1	962.162	0.38	732	405	823
40	7	33	41	7	34	1651.5	1058.252	0.25	693	387	781
40	7	33	40	7	34	1616.8	1058.252	0.02	690	385	780
40	7	33	39	7	32	1583.1	1058.252	0.24	694	387	785
40	8	32	41	8	33	1651.5	1168.149	0.15	668	377	759
40	8	32	40	8	33	1616.8	1168.149	0.01	672	378	762
40	8	32	39	8	31	1583.1	1168.149	0.14	669	377	762
40	9	31	41	9	32	1651.5	1291.467	0.08	649	372	745
40	9	31	40	9	32	1616.8	1291.467	0.01	646	371	744
40	9	31	39	9	30	1583.0	1291.467	0.08	650	373	748
40	10	30	41	10	31	1651.5	1427.806	0.04	634	371	736
40	10	30	40	10	31	1616.8	1427.806	0.01	637	372	740
40	10	30	39	10	29	1583.0	1427.806	0.04	634	371	740

VI. APPENDIX B

LISTING OF LINEWIDTHS FOR TYPE B BAND

The format of this listing is the same as that used for the tabulation in the Appendix A. The line position and the relative line intensity values refer to the ν_2 fundamental band of NO_2 . All other spectral parameters listed can be applied to any type B vibrational-rotational band of nitrogen dioxide. Pure rotational band of NO_2 is also a type B band, and the linewidth results given here are very much valid for that band.

It is interesting to observe from the tabulation presented in this Appendix that the linewidth values in P-, Q-, and R-branches (i.e., $\Delta J = -1, 0$, and $+1$, respectively) for a given lower state and with $\Delta K_a = +1$ are nearly the same. Thus, in the case of self-broadening of NO_2 , in the range $11 \leq J \leq 20$ and $K_a \leq 5$, where only the values for the R-branch are computed, one may use these $\gamma_{\text{NO}_2-\text{NO}_2}^\circ$ results for P- and Q-branches also.

Listing of Linewidth Parameters for Type B Band of NO₂

Lower State			Upper State			Line Position in the ν_2 Band (cm ⁻¹)	Rotational Energy of the Lower State (cm ⁻¹)	Relative Line Intensity (ν_2 Band) at 300°K	γ° (in 10 ⁻⁴ cm ⁻¹ atm ⁻¹) of NO ₂			
N	K _a	K _c	N	K _a	K _c				Lines Broadened by NO ₂	N ₂ 300°K	O ₂	Air 200°K
0	0	0	1	1	1	758.1	0.0	0.98	1094	749	424	907
1	1	1	2	2	0	774.1	8.410	1.45	1069	747	421	898
2	0	2	3	1	3	759.7	2.532	1.95	1095	723	411	874
2	0	2	2	1	1	757.3	2.532	2.43	1096	759	428	920
2	0	2	1	1	1	755.5	2.532	0.49	1095	742	420	898
2	1	1	3	2	2	774.8	10.145	1.60	1073	743	417	894
2	1	1	2	2	0	772.3	10.145	0.80	1071	734	414	883
2	2	0	3	3	1	789.9	32.811	2.20	1028	695	395	830
3	1	3	4	2	2	775.8	12.573	1.77	1072	731	411	879
3	1	3	3	2	2	772.4	12.573	1.38	1072	742	417	892
3	1	3	2	2	0	769.9	12.573	0.16	1070	766	430	923
3	2	2	4	3	1	790.8	35.344	2.28	1032	721	406	864
3	2	2	3	3	1	787.4	35.344	0.76	1031	719	406	862
3	3	1	4	4	0	805.6	73.074	2.59	981	665	375	791
4	0	4	5	1	5	761.3	8.441	2.86	1097	722	408	873
4	0	4	4	1	3	757.3	8.441	4.22	1101	764	428	928
4	0	4	3	1	3	753.8	8.441	1.43	1097	724	410	875
4	1	3	5	2	4	776.5	16.135	1.97	1078	753	420	909
4	1	3	4	2	2	772.2	16.135	1.91	1077	749	419	904
4	1	3	3	2	2	768.9	16.135	0.35	1077	747	418	901
4	2	2	5	3	3	791.6	38.722	2.40	1034	722	406	867
4	2	2	4	3	1	787.4	38.722	1.35	1033	723	407	868
4	2	2	3	3	1	784.0	38.722	0.11	1031	727	409	873
4	3	1	5	4	2	806.5	76.452	2.63	990	702	390	840
4	3	1	4	4	0	802.3	76.452	0.65	984	694	387	830
4	4	0	5	5	1	821.1	129.053	2.60	945	625	360	729
5	1	5	6	2	4	777.6	20.065	2.10	1074	723	407	871
5	1	5	5	2	4	772.5	20.065	2.33	1074	727	408	874
5	1	5	4	2	2	768.3	20.065	0.54	1072	730	411	879
5	2	4	6	3	3	792.4	42.942	2.52	1035	722	406	867
5	2	4	5	3	3	787.4	42.942	1.84	1036	724	407	870
5	2	4	4	3	1	783.2	42.942	0.25	1034	727	408	873

5	3	3	6	4	2	807.3	80.674	2.68	991	708	392	849
5	3	3	5	4	2	802.3	80.674	1.18	992	709	393	849
5	3	3	4	4	0	798.0	80.674	0.07	986	706	392	846
5	4	2	6	5	1	822.0	133.277	2.60	958	675	376	795
5	4	2	5	5	1	816.9	133.277	0.52	952	662	372	777
5	5	1	6	6	0	836.4	200.538	2.30	916	573	348	667
6	0	6	7	1	7	762.8	17.723	3.68	1097	724	409	874
6	0	6	6	1	5	757.5	17.723	5.78	1103	770	430	934
6	0	6	5	1	5	752.0	17.723	2.29	1097	724	409	874
6	1	5	7	2	6	778.0	25.548	2.31	1080	761	423	917
6	1	5	6	2	4	772.1	25.548	2.82	1081	758	422	915
6	1	5	5	2	4	767.0	25.548	0.75	1080	757	421	914
6	2	4	7	3	5	793.3	48.012	2.63	1037	722	405	867
6	2	4	6	3	3	787.4	48.012	2.28	1036	723	406	868
6	2	4	5	3	3	782.3	48.012	0.41	1036	725	407	871
6	3	3	7	4	4	808.2	85.741	2.74	993	710	392	851
6	3	3	6	4	2	802.3	85.741	1.62	991	709	393	851
6	3	3	5	4	2	797.2	85.741	0.17	992	712	395	854
6	4	2	7	5	3	822.8	138.346	2.61	958	684	380	810
6	4	2	6	5	1	816.9	138.346	0.94	957	682	379	807
6	4	2	5	5	1	811.8	138.346	0.05	951	677	377	798
6	5	1	7	6	2	837.2	205.608	2.28	935	636	365	753
6	5	1	6	6	0	831.3	205.608	0.38	924	616	359	724
6	6	0	7	7	1	851.3	287.262	1.83		533	342	633
7	1	7	8	2	6	779.4	30.887	2.37	1074	722	406	868
7	1	7	7	2	6	772.7	30.887	3.11	1074	723	406	869
7	1	7	6	2	4	766.8	30.887	0.90	1074	724	407	871
7	2	6	8	3	5	794.1	53.917	2.73	1036	722	405	865
7	2	6	7	3	5	787.4	53.917	2.67	1037	724	405	868
7	2	6	6	3	3	781.5	53.917	0.56	1036	724	406	869
7	3	5	8	4	4	809.0	91.653	2.80	994	710	392	849
7	3	5	7	4	4	802.3	91.653	1.99	994	711	393	852
7	3	5	6	4	2	796.3	91.653	0.29	992	711	393	853
7	4	4	8	5	3	823.7	144.259	2.63	960	688	381	815
7	4	4	7	5	3	816.9	144.259	1.29	961	688	381	815
7	4	4	6	5	1	811.0	144.259	0.11	960	688	382	815
7	5	3	8	6	2	838.1	211.524	2.26	940	653	370	776
7	5	3	7	6	2	831.3	211.524	0.69	937	647	369	769
7	5	3	6	6	0	825.4	211.524	0.03	925	633	364	748
7	6	2	8	7	1	852.2	293.180	1.80		605	359	726
7	6	2	7	7	1	845.4	293.180	0.26		581	352	695
7	7	1	8	8	0	865.9	388.916	1.32		526	342	635
8	0	8	9	1	9	764.3	30.377	4.39	1096	726	409	872
8	0	8	8	1	7	757.7	30.377	7.04	1101	774	432	932
8	0	8	7	1	7	750.2	30.377	3.05	1096	725	409	873
8	1	7	9	2	8	779.5	38.383	2.60	1079	765	425	916
8	1	7	8	2	6	771.9	38.383	3.60	1080	763	424	915
8	1	7	7	2	6	765.2	38.383	1.11	1080	763	424	916
8	2	6	9	3	7	795.0	60.682	2.82	1036	722	405	862
8	2	6	8	3	5	787.4	60.682	3.01	1036	722	405	864
8	2	6	7	3	5	780.5	60.682	0.71	1037	724	406	867
8	3	5	9	4	6	809.9	98.409	2.85	993	709	392	845
8	3	5	8	4	4	802.3	98.409	2.32	993	709	392	847
8	3	5	7	4	4	795.5	98.409	0.40	993	711	393	850

8	4	4	9	5	5	824.5	151.017	2.64	961	689	381	815
8	4	4	8	5	3	816.9	151.017	1.59	960	688	381	815
8	4	4	7	5	3	810.2	151.017	0.19	960	690	382	818
8	5	3	9	6	4	838.9	218.284	2.25	939	659	372	782
8	5	3	8	6	2	831.3	218.284	0.95	939	657	372	781
8	5	3	7	6	2	824.5	218.284	0.07	936	655	371	778
8	6	2	9	7	3	853.0	299.944	1.77		623	363	749
8	6	2	8	7	1	845.4	299.944	0.47		621	363	746
8	6	2	7	7	1	838.6	299.944	0.02		604	358	723
8	7	1	9	8	2	866.7	395.684	1.29		557	349	678
8	7	1	8	8	0	859.1	395.684	0.16		567	350	687
8	8	0	9	9	1	880.1	505.153	0.87		512	340	623
9	1	9	10	2	8	781.3	45.037	2.55	1073	722	406	863
9	1	9	9	2	8	772.9	45.037	3.70	1073	722	405	863
9	1	9	8	2	6	765.3	45.037	1.19	1074	723	406	867
9	2	8	10	3	7	795.8	68.267	2.89	1033	721	405	858
9	2	8	9	3	7	787.4	68.267	3.30	1035	723	405	862
9	2	8	8	3	5	779.8	68.267	0.85	1035	723	405	864
9	3	7	10	4	6	810.7	106.009	2.89	992	708	391	840
9	3	7	9	4	6	802.3	106.009	2.60	993	709	392	844
9	3	7	8	4	4	794.7	106.009	0.52	993	710	392	846
9	4	6	10	5	5	825.4	158.619	2.64	960	688	381	811
9	4	6	9	5	5	816.9	158.619	1.85	962	690	382	814
9	4	6	8	5	3	809.3	158.619	0.27	960	689	382	815
9	5	5	10	6	4	839.8	225.890	2.23	941	662	373	783
9	5	5	9	6	4	831.3	225.890	1.17	942	662	373	785
9	5	5	8	6	2	823.7	225.890	0.12	941	661	373	785
9	6	4	10	7	3	853.9	307.554	1.74		638	368	768
9	6	4	9	7	3	845.4	307.554	0.64		629	365	756
9	6	4	8	7	1	837.8	307.554	0.04		630	365	757
9	7	3	10	8	2	867.6	403.298	1.26		626	366	759
9	7	3	9	8	2	859.1	403.298	0.29		569	351	691
9	7	3	8	8	0	851.5	403.298	0.01		583	354	705
9	8	2	10	9	1	880.9	512.772	0.85		571	352	687
9	8	2	9	9	1	872.5	512.772	0.09		504	339	615
9	9	1	10	10	0	893.9	635.597	0.53		589	356	701
10	0	10	11	1	11	765.8	46.398	4.95	1095	725	409	866
10	0	10	10	1	9	757.9	46.398	7.93	1097	773	433	923
10	0	10	9	1	9	748.3	46.398	3.67	1095	724	409	868
10	1	9	11	2	10	781.0	54.637	2.81	1074	763	426	907
10	1	9	10	2	8	771.7	54.637	4.24	1074	762	425	906
10	1	9	9	2	8	763.3	54.637	1.42	1075	763	425	909
10	2	8	11	3	9	796.7	76.734	2.95	1032	720	405	853
10	2	8	10	3	7	787.4	76.734	3.55	1033	721	405	856
10	2	8	9	3	7	778.9	76.734	0.98	1034	722	406	859
10	3	7	11	4	8	811.6	114.454	2.91	990	706	391	833
10	3	7	10	4	6	802.3	114.454	2.84	990	707	391	836
10	3	7	9	4	6	793.8	114.454	0.63	992	708	392	840
10	4	6	11	5	7	826.2	167.066	2.64	959	686	381	806
10	4	6	10	5	5	816.9	167.066	2.07	959	687	381	808
10	4	6	9	5	5	808.5	167.066	0.36	961	689	382	812
10	5	5	11	6	6	840.6	234.340	2.21	940	662	373	780
10	5	5	10	6	4	831.3	234.340	1.35	940	662	373	781
10	5	5	9	6	4	822.9	234.340	0.18	940	663	373	784

10	6	4	11	7	5	854.7	316.008	1.71		639	368	767
10	6	4	10	7	3	845.4	316.008	0.79		640	368	770
10	6	4	9	7	3	836.9	316.008	0.07		633	366	760
10	7	3	11	8	4	868.4	411.757	1.23		612	361	742
10	7	3	10	8	2	859.1	411.757	0.40		640	371	777
10	7	3	9	8	2	850.7	411.757	0.02		590	356	714
10	8	2	11	9	3	881.8	521.237	0.82		594	358	721
10	8	2	10	9	1	872.5	521.237	0.17		629	368	757
10	8	2	9	9	1	864.0	521.237	0.00		583	355	708
10	9	1	11	10	2	894.8	644.069	0.51		577	354	691
10	9	1	10	10	0	885.4	644.069	0.05		629	368	747
10	10	0	11	11	1	907.3	779.857	0.30		632	370	750
11	1	11	12	2	10	783.3	62.513	2.63	1071	720	406	856
11	1	11	11	2	10	773.1	62.513	4.12		719	404	857
11	1	11	10	2	8	763.9	62.513	1.40		722	406	861
11	2	10	12	3	9	797.5	85.991	2.98	1030	717	404	848
11	2	10	11	3	9	787.4	85.991	3.76		719	405	852
11	2	10	10	3	7	778.1	85.991	1.09		720	405	855
11	3	9	12	4	8	812.4	123.743	2.91	988	703	390	827
11	3	9	11	4	8	802.3	123.743	3.04		705	391	831
11	3	9	10	4	6	793.0	123.743	0.73		706	391	834
11	4	8	12	5	7	827.1	176.358	2.62	957	683	380	798
11	4	8	11	5	7	816.9	176.358	2.24		686	381	803
11	4	8	10	5	5	807.6	176.358	0.43		687	381	805
11	5	7	12	6	6	841.5	243.636	2.18	938	660	372	774
11	5	7	11	6	6	831.3	243.636	1.51		662	373	778
11	5	7	10	6	4	822.0	243.636	0.23		662	373	780
11	6	6	12	7	5	855.6	325.308	1.68		641	368	766
11	6	6	11	7	5	845.4	325.308	0.91		640	368	767
11	6	6	10	7	3	836.1	325.308	0.10		643	369	771
11	7	5	12	8	4	869.3	421.063	1.20		632	368	765
11	7	5	11	8	4	859.1	421.063	0.50		612	361	742
11	7	5	10	8	2	849.8	421.063	0.04		644	372	780
11	8	4	12	9	3	882.7	530.549	0.80		638	372	768
11	8	4	11	9	3	872.5	530.549	0.24		563	350	688
11	8	4	10	9	1	863.2	530.549	0.01		614	363	739
11	9	3	12	10	2	895.6	653.388	0.49		656	380	778
11	9	3	11	10	2	885.4	653.388	0.09		535	345	650
11	9	3	10	10	0	876.1	653.388	0.00		605	361	722
11	10	2	12	11	1	908.2	789.184	0.29		608	363	718
11	10	2	11	11	1	898.0	789.184	0.03		583	355	694
12	0	12	13	1	13	767.2	65.783	5.35	1094	721	408	859
12	0	12	12	1	11	758.2	65.783	8.45		767	433	912
12	0	12	11	1	11	746.4	65.783	4.15		721	408	862
12	1	11	13	2	12	782.4	74.310	2.94	1070	757	426	897
12	1	11	12	2	10	771.5	74.310	4.73		756	426	893
12	1	11	11	2	10	761.3	74.310	1.65		759	426	899
12	2	10	13	3	11	798.3	96.172	2.99	1027	714	405	841
12	2	10	12	3	9	787.4	96.172	3.93		716	405	844
12	2	10	11	3	9	777.2	96.172	1.19		717	405	847
12	3	9	13	4	10	813.2	133.878	2.90	985	699	390	820
12	3	9	12	4	8	802.3	133.878	3.20		701	390	823
12	3	9	11	4	8	792.1	133.878	0.81		703	390	827
12	4	8	13	5	9	827.9	186.494	2.60	954	679	379	792

12	4	8	12	5	7	816.9	1 86.494	2.39		681	379	795
12	4	8	11	5	7	806.8	1 86.494	0.50		684	380	799
12	5	7	13	6	8	842.3	2 53.776	2.14	936	657	371	767
12	5	7	12	6	6	831.3	2 53.776	1.63		658	372	770
12	5	7	11	6	6	821.2	2 53.776	0.28		661	372	775
12	6	6	13	7	7	856.4	3 35.453	1.64		638	368	759
12	6	6	12	7	5	845.4	3 35.453	1.02		640	368	763
12	6	6	11	7	5	835.3	3 35.453	0.14		640	368	764
12	7	5	13	8	6	870.1	4 31.213	1.17		625	365	754
12	7	5	12	8	4	859.1	4 31.213	0.57		635	369	767
12	7	5	11	8	4	849.0	4 31.213	0.06		615	362	744
12	8	4	13	9	5	883.5	5 40.707	0.77		602	360	730
12	8	4	12	9	3	872.5	5 40.707	0.29		657	379	788
12	8	4	11	9	3	862.3	5 40.707	0.02		592	357	717
12	9	3	13	10	4	896.5	6 63.553	0.48		622	367	743
12	9	3	12	10	2	885.5	6 63.553	0.13		699	399	823
12	9	3	11	10	2	875.3	6 63.553	0.01		615	364	734
12	10	2	13	11	3	909.0	7 99.359	0.27		696	399	815
12	10	2	12	11	1	898.0	7 99.359	0.05		692	396	810
12	10	2	11	11	1	887.8	7 99.359	0.00		679	389	797
13	1	13	14	2	12	785.3	83.314	2.61	1068	717	406	850
13	1	13	13	2	12	773.4	83.314	4.36		715	403	850
13	1	13	12	2	10	762.5	83.314	1.53		720	406	854
13	2	12	14	3	11	799.2	1 07.089	2.98	1027	711	402	838
13	2	12	13	3	11	787.4	1 07.089	4.06		713	403	842
13	2	12	12	3	9	776.4	1 07.089	1.27		715	403	844
13	3	11	14	4	10	814.1	1 44.855	2.88	983	695	389	813
13	3	11	13	4	10	802.3	1 44.855	3.32		697	390	817
13	3	11	12	4	8	791.3	1 44.855	0.89		699	390	820
13	4	10	14	5	9	828.8	1 97.475	2.56	952	675	378	784
13	4	10	13	5	9	816.9	1 97.475	2.50		678	379	788
13	4	10	12	5	7	806.0	1 97.475	0.57		679	379	791
13	5	9	14	6	8	843.2	2 64.760	2.10	933	653	371	759
13	5	9	13	6	8	831.3	2 64.760	1.73		656	371	764
13	5	9	12	6	6	820.3	2 64.760	0.32		657	372	767
13	6	8	14	7	7	857.3	3 46.443	1.60		636	367	752
13	6	8	13	7	7	845.4	3 46.443	1.10		638	368	757
13	6	8	12	7	5	834.4	3 46.443	0.17		640	368	761
13	7	7	14	8	6	871.0	4 42.210	1.13		630	367	755
13	7	7	13	8	6	859.2	4 42.210	0.63		624	365	751
13	7	7	12	8	4	848.1	4 42.210	0.08		635	369	766
13	8	6	14	9	5	884.4	5 51.710	0.74		632	370	761
13	8	6	13	9	5	872.5	5 51.710	0.33		593	357	719
13	8	6	12	9	3	861.5	5 51.710	0.03		656	378	787
13	9	5	14	10	4	897.3	6 74.566	0.46		645	377	766
13	9	5	13	10	4	885.5	6 74.566	0.16		563	351	682
13	9	5	12	10	2	874.4	6 74.566	0.01		675	387	800
13	10	4	14	11	3	909.9	8 10.381	0.26		662	386	776
13	10	4	13	11	3	898.0	8 10.381	0.06		620	368	735
13	10	4	12	11	1	887.0	8 10.381	0.00		620	367	734
14	0	14	15	1	15	768.6	88.525	5.59	1092	715	407	851
14	0	14	14	1	13	758.5	88.525	8.60		760	431	902
14	0	14	13	1	13	744.4	88.525	4.48		716	407	854
14	1	13	15	2	14	783.8	97.399	2.99	1066	749	424	887

14	1	13	14	2	12	771.2	57.399	5.06		747	424	879
14	1	13	13	2	12	759.3	57.399	1.81		751	425	888
14	2	12	15	3	13	800.0	118.998	2.96	10 22	707	403	830
14	2	12	14	3	11	787.3	118.998	4.15		709	403	832
14	2	12	13	3	11	775.5	118.998	1.34		711	404	836
14	3	11	15	4	12	814.9	156.679	2.84	981	691	388	807
14	3	11	14	4	10	802.3	156.679	3.40		693	388	810
14	3	11	13	4	10	790.4	156.679	0.95		695	389	813
14	4	10	15	5	11	829.6	209.300	2.51	949	670	377	777
14	4	10	14	5	9	816.9	209.300	2.58		673	378	780
14	4	10	13	5	9	805.1	209.300	0.62		675	378	785
14	5	9	15	6	10	844.0	276.590	2.05	930	649	370	752
14	5	9	14	6	8	831.3	276.590	1.80		650	370	755
14	5	9	13	6	8	819.5	276.590	0.37		653	371	760
14	6	8	15	7	9	858.1	358.278	1.55		631	366	743
14	6	8	14	7	7	845.4	358.278	1.16		633	367	747
14	6	8	13	7	7	833.6	358.278	0.20		636	367	752
14	7	7	15	8	8	871.9	454.052	1.09		623	365	744
14	7	7	14	8	6	859.2	454.052	0.68		628	367	752
14	7	7	13	8	6	847.3	454.052	0.09		623	365	748
14	8	6	15	9	7	885.2	563.560	0.72		612	363	736
14	8	6	14	9	5	872.5	563.560	0.37		638	372	766
14	8	6	13	9	5	860.7	563.560	0.04		601	359	725
14	9	5	15	10	6	898.2	686.425	0.44		602	361	720
14	9	5	14	10	4	885.5	686.425	0.18		670	388	790
14	9	5	13	10	4	873.6	686.425	0.02		606	362	724
14	10	4	15	11	5	910.8	822.250	0.25		645	379	757
14	10	4	14	11	3	898.0	822.250	0.08		703	406	816
14	10	4	13	11	3	886.2	822.250	0.00		674	391	789
15	1	15	16	2	14	787.4	107.438	2.50	10 66	713	406	845
15	1	15	15	2	14	773.8	107.438	4.42		710	401	844
15	1	15	14	2	12	761.2	107.438	1.57		716	406	848
15	2	14	16	3	13	801.0	131.557	2.91	10 24	704	400	830
15	2	14	15	3	13	787.4	131.557	4.19		706	401	833
15	2	14	14	3	11	774.8	131.557	1.38		708	401	835
15	3	13	16	4	12	815.8	169.345	2.78	979	686	387	802
15	3	13	15	4	12	802.3	169.345	3.45		689	387	805
15	3	13	14	4	10	789.6	169.345	1.00		691	388	807
15	4	12	16	5	11	830.5	221.969	2.44	947	665	376	769
15	4	12	15	5	11	816.9	221.969	2.63		668	377	774
15	4	12	14	5	9	804.3	221.969	0.66		670	377	777
15	5	11	16	6	10	844.9	289.263	1.99	927	644	368	744
15	5	11	15	6	10	831.3	289.263	1.85		647	369	749
15	5	11	14	6	8	818.7	289.263	0.40		649	370	752
15	6	10	16	7	9	859.0	370.958	1.50		627	365	735
15	6	10	15	7	9	845.4	370.958	1.20		630	366	740
15	6	10	14	7	7	832.7	370.958	0.22		632	366	744
15	7	9	16	8	8	872.7	466.739	1.05		621	365	738
15	7	9	15	8	8	859.2	466.739	0.72		621	365	740
15	7	9	14	8	6	846.5	466.739	0.11		627	367	749
15	8	8	16	9	7	886.1	576.256	0.69		624	367	746
15	8	8	15	9	7	872.5	576.256	0.39		607	361	729
15	8	8	14	9	5	859.8	576.256	0.05		637	372	763
15	9	7	16	10	6	899.0	699.131	0.42		635	373	756

15	9	7	15	10	6	885.5	699.131	0.20		572	353	691
15	9	7	14	10	4	872.8	699.131	0.02		663	384	786
15	10	6	16	11	5	911.6	834.967	0.24		645	380	759
15	10	6	15	11	5	898.0	834.967	0.09		576	356	686
15	10	6	14	11	3	885.3	834.967	0.01		668	388	785
16	0	16	17	1	17	769.9	114.618	5.67	1090	708	404	843
16	0	16	16	1	15	758.9	114.618	8.42		752	429	894
16	0	16	15	1	15	742.5	114.618	4.65		710	404	846
16	1	15	17	2	16	785.1	123.902	2.96	1063	740	421	880
16	1	15	16	2	14	771.0	123.902	5.24		737	421	869
16	1	15	15	2	14	757.3	123.902	1.90		743	422	880
16	2	14	17	3	15	801.6	145.217	2.85	1018	701	401	822
16	2	14	16	3	13	787.3	145.217	4.21		702	401	823
16	2	14	15	3	13	773.8	145.217	1.41		704	402	826
16	3	13	17	4	14	816.6	182.858	2.71	977	682	386	797
16	3	13	16	4	12	802.3	182.858	3.47		684	386	799
16	3	13	15	4	12	788.8	182.858	1.04		687	387	802
16	4	12	17	5	13	831.3	235.483	2.37	944	662	375	764
16	4	12	16	5	11	816.9	235.483	2.66		663	375	766
16	4	12	15	5	11	803.4	235.483	0.70		666	376	770
16	5	11	17	6	12	845.7	302.782	1.92	924	639	367	737
16	5	11	16	6	10	831.4	302.782	1.88		641	368	740
16	5	11	15	6	10	817.8	302.782	0.43		644	369	745
16	6	10	17	7	11	859.8	384.482	1.44		621	364	727
16	6	10	16	7	9	845.4	384.482	1.23		623	364	730
16	6	10	15	7	9	831.9	384.482	0.24		627	365	736
16	7	9	17	8	10	873.6	480.271	1.01		614	363	728
16	7	9	16	8	8	859.2	480.271	0.74		618	364	734
16	7	9	15	8	8	845.6	480.271	0.12		618	364	736
16	8	8	17	9	9	886.9	589.798	0.66		610	363	729
16	8	8	16	9	7	872.5	589.798	0.41		624	368	746
16	8	8	15	9	7	859.0	589.798	0.06		608	362	728
16	9	7	17	10	8	899.9	712.683	0.40		599	361	717
16	9	7	16	10	6	885.5	712.683	0.21		645	378	767
16	9	7	15	10	6	871.9	712.683	0.02		592	358	708
16	10	6	17	11	7	912.5	848.530	0.23		611	367	721
16	10	6	16	11	5	898.1	848.530	0.10		673	395	787
16	10	6	15	11	5	884.5	848.530	0.01		624	372	734
17	1	17	18	2	16	789.6	134.884	2.32	1064	709	405	842
17	1	17	17	2	16	774.2	134.884	4.33		704	399	839
17	1	17	16	2	14	760.0	134.884	1.53		711	405	842
17	2	16	18	3	15	802.7	159.395	2.77	1022	698	397	826
17	2	16	17	3	15	787.5	159.395	4.17		700	398	827
17	2	16	16	3	13	773.1	159.395	1.43		701	399	829
17	3	15	18	4	14	817.5	197.211	2.63	975	678	385	793
17	3	15	17	4	14	802.3	197.211	3.46		681	385	796
17	3	15	16	4	12	787.9	197.211	1.06		683	386	797
17	4	14	18	5	13	832.2	249.841	2.29	941	657	374	758
17	4	14	17	5	13	817.0	249.841	2.65		660	375	761
17	4	14	16	5	11	802.6	249.841	0.72		661	375	764
17	5	13	18	6	12	846.6	317.145	1.85	922	634	366	730
17	5	13	17	6	12	831.4	317.145	1.89		637	367	735
17	5	13	16	6	10	817.0	317.145	0.45		639	367	738
17	6	12	18	7	11	860.7	398.852	1.38		616	363	719

17	6	12	17	7	11	845.4	398.852	1.24		619	364	724
17	6	12	16	7	9	831.1	398.852	0.26		621	364	728
17	7	11	18	8	10	874.4	494.649	0.96		610	362	721
17	7	11	17	8	10	859.2	494.649	0.75		612	363	725
17	7	11	16	8	8	844.8	494.649	0.14		616	364	731
17	8	10	18	9	9	887.8	604.185	0.63		612	364	729
17	8	10	17	9	9	872.5	604.185	0.42		606	362	723
17	8	10	16	9	7	858.1	604.185	0.07		621	367	742
17	9	9	18	10	8	900.8	727.081	0.38		621	369	740
17	9	9	17	10	8	885.5	727.081	0.22		584	356	701
17	9	9	16	10	6	871.1	727.081	0.03		642	377	764
17	10	8	18	11	7	913.3	862.941	0.22		635	377	752
17	10	8	17	11	7	898.1	862.941	0.11		560	352	670
17	10	8	16	11	5	883.6	862.941	0.01		658	386	777
18	0	18	19	1	19	771.2	144.056	5.60	1088	700	401	834
18	0	18	18	1	17	759.4	144.056	7.96		745	426	888
18	0	18	17	1	17	740.5	144.056	4.67		702	401	838
18	1	17	19	2	18	786.4	153.815	2.86	1058	733	418	875
18	1	17	18	2	16	770.7	153.815	5.26		728	419	862
18	1	17	17	2	16	755.2	153.815	1.92		735	419	875
18	2	16	19	3	17	803.3	174.832	2.68	1014	695	399	818
18	2	16	18	3	15	787.2	174.832	4.13		696	400	819
18	2	16	17	3	15	772.0	174.832	1.43		698	400	820
18	3	15	19	4	16	818.3	212.415	2.53	973	675	383	790
18	3	15	18	4	14	802.3	212.415	3.42		676	384	792
18	3	15	17	4	14	787.1	212.415	1.07		679	385	794
18	4	14	19	5	15	833.0	265.043	2.20	939	654	373	754
18	4	14	18	5	13	817.0	265.043	2.63		655	373	756
18	4	14	17	5	13	801.8	265.043	0.74		657	374	759
18	5	13	19	6	14	847.4	332.351	1.77	919	630	365	725
18	5	13	18	6	12	831.4	332.351	1.88		631	365	727
18	5	13	17	6	12	816.2	332.351	0.47		634	366	732
18	6	12	19	7	13	861.5	414.066	1.32		611	361	712
18	6	12	18	7	11	845.5	414.066	1.24		613	362	714
18	6	12	17	7	11	830.2	414.066	0.27		616	363	720
18	7	11	19	8	12	875.3	509.872	0.92		603	361	712
18	7	11	18	8	10	859.2	509.872	0.76		607	362	717
18	7	11	17	8	10	844.0	509.872	0.15		609	362	720
18	8	10	19	9	11	888.6	619.418	0.59		602	361	716
18	8	10	18	9	9	872.6	619.418	0.43		611	364	727
18	8	10	17	9	9	857.3	619.418	0.07		604	361	720
18	9	9	19	10	10	901.6	742.326	0.36		596	360	712
18	9	9	18	10	8	885.5	742.326	0.23		626	371	743
18	9	9	17	10	8	870.3	742.326	0.03		591	359	707
18	10	8	19	11	9	914.2	878.199	0.20		593	361	707
18	10	8	18	11	7	898.1	878.199	0.11		648	384	765
18	10	8	17	11	7	882.8	878.199	0.01		594	361	705
19	1	19	20	2	18	791.9	165.647	2.08	1061	707	405	841
19	1	19	19	2	18	774.6	165.647	4.12		699	397	834
19	1	19	18	2	16	758.8	165.647	1.43		707	405	838
19	2	18	20	3	17	804.4	190.599	2.57	1019	693	395	823
19	2	18	19	3	17	787.5	190.599	4.03		695	395	824
19	2	18	18	3	15	771.5	190.599	1.41		695	396	825
19	3	17	20	4	16	819.2	228.454	2.43	971	672	382	787

19	3	17	19	4	16	802.3	228.454	3.35		674	383	789
19	3	17	18	4	14	786.2	228.454	1.08		675	384	790
19	4	16	20	5	15	833.9	281.089	2.11	937	650	371	750
19	4	16	19	5	15	817.0	281.089	2.58		653	372	753
19	4	16	18	5	13	800.9	281.089	0.75		654	372	754
19	5	15	20	6	14	848.3	348.403	1.69	917	626	364	720
19	5	15	19	6	14	831.4	348.403	1.85		628	365	723
19	5	15	18	6	12	815.3	348.403	0.48		630	365	725
19	6	14	20	7	13	862.4	430.125	1.26		606	360	705
19	6	14	19	7	13	845.5	430.125	1.23		609	361	710
19	6	14	18	7	11	829.4	430.125	0.28		611	362	712
19	7	13	20	8	12	876.1	525.939	0.87		599	360	705
19	7	13	19	8	12	859.2	525.939	0.76		602	360	709
19	7	13	18	8	10	843.1	525.939	0.15		605	361	714
19	8	12	20	9	11	889.5	635.497	0.56		601	361	713
19	8	12	19	9	11	872.6	635.497	0.43		598	360	712
19	8	12	18	9	9	856.5	635.497	0.08		608	363	723
19	9	11	20	10	10	902.5	758.417	0.34		608	365	724
19	9	11	19	10	10	885.5	758.417	0.23		587	358	702
19	9	11	18	10	8	869.4	758.417	0.04		622	370	740
19	10	10	20	11	9	915.1	894.304	0.19		622	372	741
19	10	10	19	11	9	898.1	894.304	0.11		561	352	672
19	10	10	18	11	7	882.0	894.304	0.02		644	381	764
20	0	20	21	1	21	772.5	176.830	5.40	1086	693	397	827
20	0	20	20	1	19	760.0	176.830	7.30		740	423	885
20	0	20	19	1	19	738.5	176.830	4.56		696	398	830
20	1	19	21	2	20	787.7	187.137	2.70	1053	726	416	871
20	1	19	20	2	18	770.4	187.137	5.14		722	416	857
20	1	19	19	2	18	753.1	187.137	1.88		728	417	871
20	2	18	21	3	19	804.9	207.849	2.47	1010	692	397	817
20	2	18	20	3	17	787.2	207.849	3.94		693	398	818
20	2	18	19	3	17	770.3	207.849	1.39		694	398	818
20	3	17	21	4	18	820.0	245.350	2.32	969	669	381	786
20	3	17	20	4	16	802.3	245.350	3.26		670	382	787
20	3	17	19	4	16	785.4	245.350	1.07		672	382	788
20	4	16	21	5	17	834.7	297.979	2.00	935	647	370	748
20	4	16	20	5	15	817.0	297.979	2.52		648	371	749
20	4	16	19	5	15	800.1	297.979	0.75		650	372	751
20	5	15	21	6	16	849.1	365.298	1.60	914	622	363	717
20	5	15	20	6	14	831.4	365.298	1.81		623	363	718
20	5	15	19	6	14	814.5	365.298	0.48		626	364	721
20	6	14	21	7	15	863.2	447.027	1.19		602	359	700
20	6	14	20	7	13	845.5	447.027	1.20		603	359	702
20	6	14	19	7	13	828.6	447.027	0.29		606	360	706
20	7	13	21	8	14	877.0	542.852	0.82		593	358	698
20	7	13	20	8	12	859.2	542.852	0.74		596	359	701
20	7	13	19	8	12	842.3	542.852	0.16		598	360	705
20	8	12	21	9	13	890.4	652.420	0.53		592	359	702
20	8	12	20	9	11	872.6	652.420	0.43		598	361	709
20	8	12	19	9	11	855.6	652.420	0.08		596	360	708
20	9	11	21	10	12	903.3	775.354	0.32		589	359	702
20	9	11	20	10	10	885.6	775.354	0.23		609	365	724
20	9	11	19	10	10	868.6	775.354	0.04		589	358	702
20	10	10	21	11	11	915.9	911.255	0.18		584	359	697

20	10	10	20	11	9	898.1	911.255	0.11	629	375	747
20	10	10	19	11	9	881.2	911.255	0.02	580	358	692
21	1	21	22	2	20	794.2	199.726	1.82	705	404	840
21	1	21	21	2	20	775.1	199.726	3.80	694	395	829
21	1	21	20	2	18	757.8	199.726	1.29	705	404	837
21	2	20	22	3	19	806.1	225.169	2.33	689	393	822
21	2	20	21	3	19	787.6	225.169	3.79	690	393	822
21	2	20	20	3	17	769.8	225.169	1.35	691	394	822
21	3	19	22	4	18	820.9	263.073	2.20	666	380	784
21	3	19	21	4	18	802.3	263.073	3.15	668	381	785
21	3	19	20	4	16	784.6	263.073	1.05	659	381	786
21	4	18	22	5	17	835.6	315.713	1.90	644	369	746
21	4	18	21	5	17	817.0	315.713	2.44	646	370	748
21	4	18	20	5	15	799.2	315.713	0.74	647	370	748
21	5	17	22	6	16	850.0	383.037	1.51	618	361	714
21	5	17	21	6	16	831.4	383.037	1.75	621	362	716
21	5	17	20	6	14	813.6	383.037	0.48	622	363	717
21	6	16	22	7	15	864.1	464.774	1.12	598	358	696
21	6	16	21	7	15	845.5	464.774	1.17	601	359	699
21	6	16	20	7	13	827.7	464.774	0.29	602	359	701
21	7	15	22	8	14	877.8	560.609	0.77	589	357	693
21	7	15	21	8	14	859.2	560.609	0.73	592	358	696
21	7	15	20	8	12	841.5	560.609	0.16	594	359	700
21	8	14	22	9	13	891.2	670.189	0.50	589	358 ^c	698
21	8	14	21	9	13	872.6	670.189	0.42	589	358	699
21	8	14	20	9	11	854.8	670.189	0.08	596	360	706
21	9	13	22	10	12	904.2	793.136	0.30	595	361	708
21	9	13	21	10	12	885.6	793.136	0.23	583	357	695
21	9	13	20	10	10	867.8	793.136	0.04	605	364	720
21	10	12	22	11	11	916.8	929.053	0.17	609	367	727
21	10	12	21	11	11	898.1	929.053	0.11	564	353	674
21	10	12	20	11	9	880.3	929.053	0.02	627	374	746
22	0	22	23	1	23	773.8	212.932	5.09	686	393	820
22	0	22	22	1	21	760.6	212.932	6.49	735	421	883
22	0	22	21	1	21	736.4	212.932	4.34	689	394	823
22	1	21	23	2	22	788.9	223.862	2.49	722	413	868
22	1	21	22	2	20	770.1	223.862	4.90	717	414	854
22	1	21	21	2	20	751.0	223.862	1.79	723	414	868
22	2	20	23	3	21	806.4	244.270	2.22	690	396	818
22	2	20	22	3	19	787.0	244.270	3.66	690	396	818
22	2	20	21	3	19	768.5	244.270	1.31	691	397	818
22	3	19	23	4	20	821.7	281.663	2.08	665	380	784
22	3	19	22	4	18	802.3	281.663	3.03	665	380	784
22	3	19	21	4	18	783.7	281.663	1.02	667	380	786
22	4	18	23	5	19	836.4	334.291	1.79	642	368	744
22	4	18	22	5	17	817.0	334.291	2.35	643	369	745
22	4	18	21	5	17	798.4	334.291	0.73	644	369	746
22	5	17	23	6	18	850.8	401.620	1.42	615	361	712
22	5	17	22	6	16	831.4	401.620	1.69	616	361	712
22	5	17	21	6	16	812.8	401.620	0.48	619	362	714
22	6	16	23	7	17	864.9	483.366	1.05	594	357	692
22	6	16	22	7	15	845.5	483.366	1.13	595	357	693
22	6	16	21	7	15	826.9	483.366	0.29	598	358	697
22	7	15	23	8	16	878.7	579.211	0.72	584	356	687

22	7	15	22	8	14	859.2	579.211	0.70	586	356	690
22	7	15	21	8	14	840.6	579.211	0.16	589	357	693
22	8	14	23	9	15	892.1	688.803	0.46	581	356	689
22	8	14	22	9	13	872.6	688.803	0.41	586	358	695
22	8	14	21	9	13	854.0	688.803	0.09	586	357	695
22	9	13	23	10	14	905.1	811.764	0.28	581	357	691
22	9	13	22	10	12	885.6	811.764	0.22	594	361	707
22	9	13	21	10	12	866.9	811.764	0.04	583	357	694
22	10	12	23	11	13	917.7	947.697	0.16	577	357	689
22	10	12	22	11	11	898.2	947.697	0.11	612	369	730
22	10	12	21	11	11	879.5	947.697	0.02	575	356	685
23	1	23	24	2	22	796.6	237.119	1.54	705	404	842
23	1	23	23	2	22	775.6	237.119	3.42	689	392	826
23	1	23	22	2	20	756.8	237.119	1.13	703	403	838
23	2	22	24	3	21	807.9	263.100	2.07	687	391	821
23	2	22	23	3	21	787.6	263.100	3.47	688	391	821
23	2	22	22	3	19	768.2	263.100	1.25	688	391	821
23	3	21	24	4	20	822.6	301.069	1.95	663	379	782
23	3	21	23	4	20	802.3	301.069	2.89	664	380	783
23	3	21	22	4	18	782.9	301.069	0.98	665	380	783
23	4	20	24	5	19	837.3	353.712	1.68	639	368	743
23	4	20	23	5	19	817.0	353.712	2.24	641	368	744
23	4	20	22	5	17	797.6	353.712	0.71	642	368	744
23	5	19	24	6	18	851.7	421.047	1.33	611	360	710
23	5	19	23	6	18	831.4	421.047	1.62	614	360	712
23	5	19	22	6	16	812.0	421.047	0.47	615	360	712
23	6	18	24	7	17	865.8	502.801	0.98	590	356	689
23	6	18	23	7	17	845.5	502.801	1.09	593	357	692
23	6	18	22	7	15	826.1	502.801	0.29	594	357	693
23	7	17	24	8	16	879.6	598.657	0.67	580	355	683
23	7	17	23	8	16	859.3	598.657	0.68	582	356	686
23	7	17	22	8	14	839.8	598.657	0.16	584	356	688
23	8	16	24	9	15	892.9	708.262	0.43	578	356	685
23	8	16	23	9	15	872.6	708.262	0.39	579	356	687
23	8	16	22	9	13	853.2	708.262	0.09	584	357	692
23	9	15	24	10	14	905.9	831.238	0.26	583	358	693
23	9	15	23	10	14	885.6	831.238	0.21	576	356	685
23	9	15	22	10	12	866.1	831.238	0.04	591	360	703
23	10	14	24	11	13	918.5	967.188	0.14	594	362	711
23	10	14	23	11	13	898.2	967.188	0.11	564	353	673
23	10	14	22	11	11	878.7	967.188	0.02	609	367	728
24	0	24	25	1	25	775.1	252.353	4.69	680	390	814
24	0	24	24	1	23	761.3	252.353	5.62	732	419	882
24	0	24	23	1	23	734.4	252.353	4.03	683	391	816
24	1	23	25	2	24	790.1	263.987	2.25	719	412	867
24	1	23	24	2	22	769.8	263.987	4.55	714	412	854
24	1	23	23	2	22	748.8	263.987	1.65	719	412	867
24	2	22	25	3	23	808.0	284.102	1.96	690	395	820
24	2	22	24	3	21	786.9	284.102	3.32	690	395	820
24	2	22	23	3	21	766.6	284.102	1.20	690	395	820
24	3	21	25	4	22	823.4	321.354	1.83	662	378	783
24	3	21	24	4	20	802.3	321.354	2.75	662	378	783
24	3	21	23	4	20	782.0	321.354	0.94	663	379	784
24	4	20	25	5	21	838.1	373.977	1.56	637	367	742

24	4	20	24	5	19	817.0	373.977	2.13	638	367	742
24	4	20	23	5	19	796.7	373.977	0.68	640	368	743
24	5	19	25	6	20	852.5	441.317	1.24	609	359	709
24	5	19	24	6	18	831.4	441.317	1.54	610	359	708
24	5	19	23	6	18	811.1	441.317	0.45	612	360	710
24	6	18	25	7	19	866.7	523.080	0.91	587	355	687
24	6	18	24	7	17	845.5	523.080	1.03	588	355	688
24	6	18	23	7	17	825.2	523.080	0.28	591	356	690
24	7	17	25	8	18	880.4	618.947	0.62	575	354	679
24	7	17	24	8	16	859.3	618.947	0.65	577	354	680
24	7	17	23	8	16	839.0	618.947	0.16	580	355	683
24	8	16	25	9	17	893.8	728.566	0.40	572	354	678
24	8	16	24	9	15	872.6	728.566	0.38	576	355	682
24	8	16	23	9	15	852.3	728.566	0.08	577	355	684
24	9	15	25	10	16	906.8	851.557	0.24	572	355	680
24	9	15	24	10	14	885.6	851.557	0.20	581	358	692
24	9	15	23	10	14	865.3	851.557	0.04	575	356	684
24	10	14	25	11	15	919.4	987.524	0.13	571	355	680
24	10	14	24	11	13	898.2	987.524	0.10	596	363	713
24	10	14	23	11	13	877.8	987.524	0.02	570	355	679
25	1	25	26	2	24	799.2	277.821	1.27	705	404	844
25	1	25	25	2	24	776.2	277.821	3.01	685	391	822
25	1	25	24	2	22	755.9	277.821	0.95	703	403	841
25	2	24	26	3	23	809.7	304.390	1.80	685	389	820
25	2	24	25	3	23	787.7	304.390	3.11	686	390	820
25	2	24	24	3	21	766.6	304.390	1.12	686	390	820
25	3	23	26	4	22	824.2	342.438	1.70	662	378	781
25	3	23	25	4	22	802.3	342.438	2.59	663	378	782
25	3	23	24	4	20	781.2	342.438	0.90	663	379	782
25	4	22	26	5	21	839.0	395.085	1.45	636	366	741
25	4	22	25	5	21	817.0	395.085	2.01	637	367	742
25	4	22	24	5	19	795.9	395.085	0.65	638	367	742
25	5	21	26	6	20	853.4	462.431	1.15	607	358	707
25	5	21	25	6	20	831.4	462.431	1.45	609	359	709
25	5	21	24	6	18	810.3	462.431	0.44	609	359	709
25	6	20	26	7	19	867.5	544.203	0.84	584	354	685
25	6	20	25	7	19	845.5	544.203	0.98	587	355	687
25	6	20	24	7	17	824.4	544.203	0.27	587	355	688
25	7	19	26	8	18	881.3	640.081	0.58	572	353	676
25	7	19	25	8	18	859.3	640.081	0.61	574	354	678
25	7	19	24	8	16	838.1	640.081	0.16	576	354	680
25	8	18	26	9	17	894.7	749.714	0.37	569	354	676
25	8	18	25	9	17	872.7	749.714	0.36	570	354	677
25	8	18	24	9	15	851.5	749.714	0.08	574	355	681
25	9	17	26	10	16	907.7	872.721	0.22	572	355	681
25	9	17	25	10	16	885.6	872.721	0.20	569	354	676
25	9	17	24	10	14	864.5	872.721	0.04	579	357	689
25	10	16	26	11	15	920.3	1008.706	0.12	582	359	696
25	10	16	25	11	15	898.2	1008.706	0.10	561	352	669
25	10	16	24	11	13	877.0	1008.706	0.02	593	362	710
26	0	26	27	1	27	776.4	295.084	4.23	674	387	807
26	0	26	26	1	25	762.1	295.084	4.74	729	417	881
26	0	26	25	1	25	732.4	295.084	3.65	676	388	808
26	1	25	27	2	26	791.2	307.507	2.00	717	409	867

26	1	25	26	2	24	769.5	307.507	4.13	711	410	854
26	1	25	25	2	24	746.5	307.507	1.50	717	410	867
26	2	24	27	3	25	809.5	327.348	1.69	691	394	822
26	2	24	26	3	23	786.7	327.348	2.95	689	394	821
26	2	24	25	3	23	764.7	327.348	1.07	690	395	821
26	3	23	27	4	24	825.1	364.425	1.57	660	377	782
26	3	23	26	4	22	802.3	364.425	2.43	660	377	782
26	3	23	25	4	22	780.3	364.425	0.85	661	377	783
26	4	22	27	5	23	839.8	417.038	1.34	635	366	740
26	4	22	26	5	21	817.0	417.038	1.89	635	366	740
26	4	22	25	5	21	795.0	417.038	0.62	636	366	741
26	5	21	27	6	22	854.2	484.388	1.06	605	358	706
26	5	21	26	6	20	831.4	484.388	1.37	605	358	706
26	5	21	25	6	20	809.5	484.388	0.42	607	358	708
26	6	20	27	7	21	868.4	566.169	0.78	582	353	683
26	6	20	26	7	19	845.5	566.169	0.92	583	354	683
26	6	20	25	7	19	823.6	566.169	0.26	585	354	686
26	7	19	27	8	20	882.1	662.059	0.53	568	352	673
26	7	19	26	8	18	859.3	662.059	0.58	569	352	674
26	7	19	25	8	18	837.3	662.059	0.15	572	353	676
26	8	18	27	9	19	895.5	771.707	0.34	564	352	671
26	8	18	26	9	17	872.7	771.707	0.34	566	353	673
26	8	18	25	9	17	850.7	771.707	0.08	568	353	675
26	9	17	27	10	18	908.5	894.730	0.20	563	353	671
26	9	17	26	10	16	885.7	894.730	0.18	571	355	679
26	9	17	25	10	16	863.6	894.730	0.04	567	354	675
26	10	16	27	11	17	921.1	1030.734	0.11	564	353	672
26	10	16	26	11	15	898.2	1030.734	0.09	583	359	697
26	10	16	25	11	15	876.2	1030.734	0.02	564	354	673
27	1	27	28	2	26	801.8	321.829	1.01	706	403	847
27	1	27	27	2	26	776.9	321.829	2.58	682	389	819
27	1	27	26	2	24	755.2	321.829	0.77	704	403	843
27	2	26	28	3	25	811.5	349.036	1.53	684	388	819
27	2	26	27	3	25	787.8	349.036	2.72	686	389	819
27	2	26	26	3	23	765.0	349.036	0.98	684	388	819
27	3	25	28	4	24	825.9	387.182	1.45	661	377	781
27	3	25	27	4	24	802.3	387.182	2.27	662	377	782
27	3	25	26	4	22	779.5	387.182	0.80	662	378	781
27	4	24	28	5	23	840.5	439.832	1.24	633	365	739
27	4	24	27	5	23	817.0	439.832	1.76	635	366	740
27	4	24	26	5	21	794.2	439.832	0.58	635	366	740
27	5	23	28	6	22	855.1	507.188	0.97	604	357	705
27	5	23	27	6	22	831.4	507.188	1.28	605	357	706
27	5	23	26	6	20	808.6	507.188	0.40	605	358	706
27	6	22	28	7	21	869.2	588.978	0.71	580	353	682
27	6	22	27	7	21	845.6	588.978	0.86	582	353	684
27	6	22	26	7	19	822.7	588.978	0.25	582	353	684
27	7	21	28	8	20	883.0	664.881	0.49	565	351	671
27	7	21	27	8	20	859.3	664.881	0.54	568	352	674
27	7	21	26	8	18	836.5	664.881	0.14	569	352	674
27	8	20	28	9	19	896.4	794.543	0.31	561	352	669
27	8	20	27	9	19	872.7	794.543	0.32	563	352	670
27	8	20	26	9	17	849.8	794.543	0.08	565	353	673
27	9	19	28	10	18	909.4	917.584	0.18	563	353	672

27	9	19	27	10	18	885.7	917.584	0.17	561	352	669
27	9	19	26	10	16	862.8	917.584	0.04	569	354	677
27	10	18	28	11	17	922.0	1053.608	0.10	572	356	683
27	10	18	27	11	17	898.3	1053.608	0.09	556	352	664
27	10	18	26	11	15	875.4	1053.608	0.02	580	358	693
28	0	28	29	1	29	777.7	341.117	3.73	666	384	799
28	0	28	28	1	27	763.0	341.117	3.90	727	416	879
28	0	28	27	1	27	730.4	341.117	3.24	669	385	800
28	1	27	29	2	28	792.3	354.417	1.74	715	408	867
28	1	27	28	2	26	769.2	354.417	3.67	710	409	854
28	1	27	27	2	26	744.3	354.417	1.32	715	408	867
28	2	26	29	3	27	810.9	374.011	1.43	692	394	823
28	2	26	28	3	25	786.5	374.011	2.56	690	393	822
28	2	26	27	3	25	762.8	374.011	0.93	691	394	823
28	3	25	29	4	26	826.7	410.875	1.33	659	376	781
28	3	25	28	4	24	802.2	410.875	2.10	659	376	781
28	3	25	27	4	24	778.6	410.875	0.74	660	377	782
28	4	24	29	5	25	841.5	463.471	1.13	632	365	738
28	4	24	28	5	23	817.0	463.471	1.63	633	365	738
28	4	24	27	5	23	793.4	463.471	0.55	634	365	739
28	5	23	29	6	24	855.9	530.832	0.89	603	357	704
28	5	23	28	6	22	831.4	530.832	1.18	603	357	703
28	5	23	27	6	22	807.8	530.832	0.37	604	357	705
28	6	22	29	7	23	870.1	612.631	0.65	579	352	680
28	6	22	28	7	21	845.6	612.631	0.80	579	352	680
28	6	22	27	7	21	821.9	612.631	0.23	581	353	682
28	7	21	29	8	22	883.9	708.547	0.44	563	351	669
28	7	21	28	8	20	859.3	708.547	0.50	563	351	669
28	7	21	27	8	20	835.6	708.547	0.14	566	352	672
28	8	20	29	9	21	897.3	818.224	0.28	557	351	665
28	8	20	28	9	19	872.7	818.224	0.30	559	351	667
28	8	20	27	9	19	849.0	818.224	0.07	560	352	668
28	9	19	29	10	20	910.3	941.283	0.17	556	351	665
28	9	19	28	10	18	885.7	941.283	0.16	562	353	671
28	9	19	27	10	18	862.0	941.283	0.04	560	352	667
28	10	18	29	11	19	922.9	1077.327	0.09	557	352	665
28	10	18	28	11	17	898.3	1077.327	0.08	573	356	684
28	10	18	27	11	17	874.5	1077.327	0.02	558	352	667
29	1	29	30	2	28	804.6	369.141	0.79	707	404	849
29	1	29	29	2	28	777.5	369.141	2.17	679	388	817
29	1	29	28	2	26	754.5	369.141	0.61	705	403	846
29	2	28	30	3	27	813.3	397.035	1.27	683	387	818
29	2	28	29	3	27	787.9	397.035	2.32	686	388	819
29	2	28	28	3	25	763.5	397.035	0.84	683	388	818
29	3	27	30	4	26	827.6	435.299	1.21	661	377	780
29	3	27	29	4	26	802.3	435.299	1.94	662	377	781
29	3	27	28	4	24	777.8	435.299	0.69	661	377	781
29	4	26	30	5	25	842.3	487.952	1.03	632	365	736
29	4	26	29	5	25	817.0	487.952	1.51	633	365	738
29	4	26	28	5	23	792.5	487.952	0.51	633	365	738
29	5	25	30	6	24	856.8	555.318	0.81	601	356	702
29	5	25	29	6	24	831.5	555.318	1.09	603	357	704
29	5	25	28	6	22	807.0	555.318	0.35	603	357	704
29	6	24	30	7	23	870.9	637.127	0.59	577	352	678

29	6	24	29	7	23	845.6	637.127	0.74	579	352	680
29	6	24	28	7	21	821.1	637.127	0.22	579	352	680
29	7	23	30	8	22	884.7	733.055	0.40	561	350	666
29	7	23	29	8	22	859.3	733.055	0.47	563	351	669
29	7	23	28	8	20	834.8	733.055	0.13	564	351	669
29	8	22	30	9	21	898.1	842.749	0.25	555	350	663
29	8	22	29	9	21	872.7	842.749	0.27	557	351	665
29	8	22	28	9	19	848.2	842.749	0.07	559	351	667
29	9	21	30	10	20	911.1	965.826	0.15	556	351	665
29	9	21	29	10	20	885.7	965.826	0.15	555	351	664
29	9	21	28	10	18	861.2	965.826	0.04	560	352	669
29	10	20	30	11	19	923.7	1101.891	0.08	562	353	673
29	10	20	29	11	19	898.3	1101.891	0.08	551	350	660
29	10	20	28	11	17	873.7	1101.891	0.02	570	355	681
30	0	30	31	1	31	779.0	390.443	3.23	659	382	791
30	0	30	30	1	29	763.9	390.443	3.13	725	415	877
30	0	30	29	1	29	728.3	390.443	2.81	661	382	792
30	1	29	31	2	30	793.3	404.711	1.49	715	407	864
30	1	29	30	2	28	769.0	404.711	3.18	709	407	852
30	1	29	29	2	28	742.0	404.711	1.15	715	407	865
30	2	28	31	3	29	812.3	424.097	1.18	693	394	824
30	2	28	30	3	27	786.3	424.097	2.18	690	393	823
30	2	28	29	3	27	760.9	424.097	0.79	692	394	824
30	3	27	31	4	28	828.4	460.705	1.10	659	376	779
30	3	27	30	4	26	802.2	460.705	1.78	658	376	779
30	3	27	29	4	26	776.9	460.705	0.64	659	376	780
30	4	26	31	5	27	843.2	513.278	0.94	631	364	736
30	4	26	30	5	25	817.0	513.278	1.38	631	364	736
30	4	26	29	5	25	791.7	513.278	0.47	632	365	737
30	5	25	31	6	26	857.6	580.647	0.73	601	356	701
30	5	25	30	6	24	831.5	580.647	1.00	600	356	701
30	5	25	29	6	24	806.1	580.647	0.32	602	356	702
30	6	24	31	7	25	871.8	662.466	0.54	576	351	677
30	6	24	30	7	23	845.6	662.466	0.68	576	351	676
30	6	24	29	7	23	820.2	662.466	0.21	577	352	678
30	7	23	31	8	24	885.6	758.407	0.36	560	350	664
30	7	23	30	8	22	859.4	758.407	0.43	559	350	664
30	7	23	29	8	22	834.0	758.407	0.12	562	350	667
30	8	22	31	9	23	899.0	868.117	0.23	553	349	660
30	8	22	30	9	21	872.7	868.117	0.25	553	350	661
30	8	22	29	9	21	847.4	868.117	0.07	555	350	663
30	9	21	31	10	22	912.0	991.213	0.14	550	350	659
30	9	21	30	10	20	885.7	991.213	0.14	554	351	663
30	9	21	29	10	20	860.3	991.213	0.03	553	350	662
30	10	20	31	11	21	924.6	1127.300	0.08	550	350	659
30	10	20	30	11	19	898.3	1127.300	0.07	563	353	674
30	10	20	29	11	19	872.9	1127.300	0.02	552	351	661
31	1	31	32	2	30	807.5	419.752	0.60	710	404	852
31	1	31	31	2	30	778.3	419.752	1.78	677	386	814
31	1	31	30	2	28	754.0	419.752	0.47	707	403	849
31	2	30	32	3	29	815.2	448.382	1.04	683	387	817
31	2	30	31	3	29	788.1	448.382	1.95	686	388	818
31	2	30	30	3	27	762.0	448.382	0.70	683	387	817
31	3	29	32	4	28	829.3	466.787	0.99	661	376	780

31	3	29	31	4	28	802.3	486.787	1.63	662	377	780
31	3	29	30	4	26	776.1	486.787	0.58	661	377	780
31	4	28	32	5	27	844.0	539.443	0.85	630	364	735
31	4	28	31	5	27	817.0	539.443	1.26	631	364	736
31	4	28	30	5	25	790.9	539.443	0.43	631	364	736
31	5	27	32	6	26	858.5	606.818	0.66	600	356	699
31	5	27	31	6	26	831.5	606.818	0.92	601	356	701
31	5	27	30	6	24	805.3	606.818	0.30	600	356	701
31	6	26	32	7	25	872.6	688.647	0.48	575	351	675
31	6	26	31	7	25	845.6	688.647	0.62	577	352	677
31	6	26	30	7	23	819.4	688.647	0.19	576	351	677
31	7	25	32	8	24	886.4	784.602	0.33	559	349	663
31	7	25	31	8	24	859.4	784.602	0.39	560	350	665
31	7	25	30	8	22	833.2	784.602	0.11	560	350	665
31	8	24	32	9	23	899.8	894.329	0.21	551	349	658
31	8	24	31	9	23	872.8	894.329	0.23	553	349	660
31	8	24	30	9	21	846.5	894.329	0.06	554	350	661
31	9	23	32	10	22	912.9	1017.445	0.12	550	350	659
31	9	23	31	10	22	885.8	1017.445	0.13	549	349	658
31	9	23	30	10	20	859.5	1017.445	0.03	553	350	662
31	10	22	32	11	21	925.5	1153.553	0.07	555	351	665
31	10	22	31	11	21	898.3	1153.553	0.07	546	349	655
31	10	22	30	11	19	872.1	1153.553	0.02	560	353	671
32	0	32	33	1	33	780.3	443.054	2.74	653	379	784
32	0	32	32	1	31	765.0	443.054	2.46	724	413	874
32	0	32	31	1	31	726.3	443.054	2.38	654	380	785
32	1	31	33	2	32	794.3	458.383	1.25	715	405	861
32	1	31	32	2	30	768.9	458.383	2.69	710	405	850
32	1	31	31	2	30	739.6	458.383	0.97	715	406	862
32	2	30	33	3	31	813.7	477.605	0.96	695	393	825
32	2	30	32	3	29	786.0	477.605	1.82	691	392	823
32	2	30	31	3	29	758.8	477.605	0.65	694	393	825
32	3	29	33	4	30	830.0	513.916	0.89	659	375	779
32	3	29	32	4	28	802.2	513.916	1.48	658	375	779
32	3	29	31	4	28	775.2	513.916	0.53	659	376	779
32	4	28	33	5	29	844.9	566.455	0.76	630	364	734
32	4	28	32	5	27	817.0	566.455	1.15	630	364	733
32	4	28	31	5	27	790.0	566.455	0.40	631	364	735
32	5	27	33	6	28	859.4	633.832	0.60	599	355	698
32	5	27	32	6	26	831.5	633.832	0.83	599	355	698
32	5	27	31	6	26	804.5	633.832	0.27	600	356	699
32	6	26	33	7	27	873.5	715.670	0.43	575	351	674
32	6	26	32	7	25	845.6	715.670	0.56	574	351	674
32	6	26	31	7	25	818.6	715.670	0.17	576	351	676
32	7	25	33	8	26	887.3	811.640	0.29	558	349	661
32	7	25	32	8	24	859.4	811.640	0.36	557	349	661
32	7	25	31	8	24	832.3	811.640	0.10	559	349	663
32	8	24	33	9	25	900.7	921.383	0.18	549	348	655
32	8	24	32	9	23	872.8	921.383	0.21	549	348	656
32	8	24	31	9	23	845.7	921.383	0.06	551	349	658
32	9	23	33	10	24	913.7	1044.520	0.11	545	348	654
32	9	23	32	10	22	885.8	1044.520	0.12	548	349	657
32	9	23	31	10	22	858.7	1044.520	0.03	547	349	656
32	10	22	33	11	23	926.3	1180.651	0.06	545	349	654

32	10	22	32	11	21	898.4	1180.651	0.06	554	351	665
32	10	22	31	11	21	871.3	1180.651	0.01	546	349	656
33	1	33	34	2	32	810.5	473.660	0.45	711	404	855
33	1	33	33	2	32	779.1	473.660	1.43	675	385	812
33	1	33	32	2	30	753.6	473.660	0.35	709	403	852
33	2	32	34	3	31	817.1	503.075	0.83	683	386	816
33	2	32	33	3	31	788.2	503.075	1.60	686	387	816
33	2	32	32	3	29	760.5	503.075	0.57	683	386	816
33	3	31	34	4	30	831.0	541.645	0.80	662	376	779
33	3	31	33	4	30	802.3	541.645	1.34	663	376	780
33	3	31	32	4	28	774.5	541.645	0.48	652	376	780
33	4	30	34	5	29	845.7	594.304	0.68	630	364	732
33	4	30	33	5	29	817.0	594.304	1.04	631	364	734
33	4	30	32	5	27	789.2	594.304	0.36	630	364	734
33	5	29	34	6	28	860.2	661.688	0.53	599	355	697
33	5	29	33	6	28	831.5	661.688	0.75	600	356	698
33	5	29	32	6	26	803.6	661.688	0.25	599	355	698
33	6	28	34	7	27	874.4	743.536	0.39	574	350	673
33	6	28	33	7	27	845.6	743.536	0.51	576	351	675
33	6	28	32	7	25	817.8	743.536	0.16	575	351	674
33	7	27	34	8	26	888.2	839.520	0.26	557	348	659
33	7	27	33	8	26	859.4	839.520	0.32	558	349	662
33	7	27	32	8	24	831.5	839.520	0.10	558	349	661
33	8	26	34	9	25	901.6	949.281	0.16	548	348	653
33	8	26	33	9	25	872.8	949.281	0.19	549	348	656
33	8	26	32	9	23	844.9	949.281	0.05	549	348	656
33	9	25	34	10	24	914.6	1072.438	0.10	545	348	653
33	9	25	33	10	24	885.8	1072.438	0.11	545	348	653
33	9	25	32	10	22	857.9	1072.438	0.03	548	349	657
33	10	24	34	11	23	927.2	1208.594	0.05	548	350	658
33	10	24	33	11	23	898.4	1208.594	0.05	542	348	650
33	10	24	32	11	21	870.4	1208.594	0.01	552	351	663
34	0	34	35	1	35	781.6	498.942	2.27	647	377	777
34	0	34	34	1	33	766.1	498.942	1.89	723	412	872
34	0	34	33	1	33	724.4	498.942	1.98	648	377	778
34	1	33	35	2	34	795.3	515.426	1.03	715	405	859
34	1	33	34	2	32	768.8	515.426	2.22	710	404	849
34	1	33	33	2	32	737.3	515.426	0.81	715	405	860
34	2	32	35	3	33	815.0	534.539	0.77	696	393	825
34	2	32	34	3	31	785.6	534.539	1.49	691	392	823
34	2	32	33	3	31	756.8	534.539	0.53	695	393	825
34	3	31	35	4	32	831.7	570.510	0.71	659	375	778
34	3	31	34	4	30	802.1	570.510	1.20	659	375	778
34	3	31	33	4	30	773.4	570.510	0.43	659	375	778
34	4	30	35	5	31	846.6	623.002	0.61	629	364	731
34	4	30	34	5	29	817.0	623.002	0.93	629	363	731
34	4	30	33	5	29	788.3	623.002	0.33	630	364	732
34	5	29	35	6	30	861.1	690.386	0.47	599	355	694
34	5	29	34	6	28	831.5	690.386	0.68	598	355	695
34	5	29	33	6	28	802.8	690.386	0.23	599	355	697
34	6	28	35	7	29	875.2	772.244	0.34	573	350	671
34	6	28	34	7	27	845.6	772.244	0.46	573	350	671
34	6	28	33	7	27	816.9	772.244	0.15	575	350	673
34	7	27	35	8	28	889.0	868.242	0.23	556	348	657

34	7	27	34	8	26	859.4	868.242	0.29	556	348	657
34	7	27	33	8	26	830.7	868.242	0.09	557	348	659
34	8	26	35	9	27	902.4	978.022	0.15	546	347	650
34	8	26	34	9	25	872.8	978.022	0.17	546	347	651
34	8	26	33	9	25	844.1	978.022	0.05	547	348	653
34	9	25	35	10	26	915.5	1101.200	0.09	541	347	648
34	9	25	34	10	24	885.8	1101.200	0.10	544	348	651
34	9	25	33	10	24	857.0	1101.200	0.03	543	348	651
34	10	24	35	11	25	928.1	1237.380	0.05	540	348	648
34	10	24	34	11	23	898.4	1237.380	0.05	548	349	658
34	10	24	33	11	23	869.6	1237.380	0.01	542	348	650
35	1	35	36	2	34	813.7	530.860	0.32	713	404	857
35	1	35	35	2	34	779.9	530.860	1.13	673	384	810
35	1	35	34	2	32	753.3	530.860	0.26	711	404	855
35	2	34	36	3	33	819.0	561.108	0.65	683	386	814
35	2	34	35	3	33	788.4	561.108	1.28	687	387	814
35	2	34	34	3	31	759.1	561.108	0.45	682	386	814
35	3	33	36	4	32	832.7	599.871	0.63	663	376	778
35	3	33	35	4	32	802.3	599.871	1.08	663	376	779
35	3	33	34	4	30	772.8	599.871	0.39	663	376	778
35	4	32	36	5	31	847.4	652.534	0.54	629	363	730
35	4	32	35	5	31	817.0	652.534	0.84	630	364	731
35	4	32	34	5	29	787.5	652.534	0.29	630	363	731
35	5	31	36	6	30	861.9	719.926	0.42	598	355	692
35	5	31	35	6	30	831.5	719.926	0.61	599	355	694
35	5	31	34	6	28	802.0	719.926	0.20	599	355	695
35	6	30	36	7	29	876.1	801.794	0.30	572	350	668
35	6	30	35	7	29	845.7	801.794	0.41	574	350	671
35	6	30	34	7	27	816.1	801.794	0.13	573	350	671
35	7	29	36	8	28	889.9	897.807	0.21	554	348	654
35	7	29	35	8	28	859.4	897.807	0.26	556	348	657
35	7	29	34	8	26	829.9	897.807	0.08	556	348	657
35	8	28	36	9	27	903.3	1007.605	0.13	544	347	648
35	8	28	35	9	27	872.9	1007.605	0.15	546	347	651
35	8	28	34	9	25	843.2	1007.605	0.04	546	347	651
35	9	27	36	10	26	916.3	1130.805	0.08	541	347	647
35	9	27	35	10	26	885.9	1130.805	0.09	541	347	648
35	9	27	34	10	24	856.2	1130.805	0.02	543	348	651
35	10	26	36	11	25	929.0	1267.010	0.04	543	348	651
35	10	26	35	11	25	898.5	1267.010	0.04	538	347	645
35	10	26	34	11	23	868.8	1267.010	0.01	546	349	656
36	0	36	37	1	37	782.9	558.102	1.85	642	374	770
36	0	36	36	1	35	767.4	558.102	1.43	722	410	869
36	0	36	35	1	35	722.4	558.102	1.61	643	375	771
36	1	35	37	2	36	796.3	575.833	0.83	715	403	856
36	1	35	36	2	34	768.7	575.833	1.80	710	403	848
36	1	35	35	2	34	734.9	575.833	0.66	715	403	858
36	2	34	37	3	35	816.2	594.897	0.60	698	393	825
36	2	34	36	3	33	785.2	594.897	1.19	692	391	822
36	2	34	35	3	33	754.6	594.897	0.42	697	393	825
36	3	33	37	4	34	833.3	630.487	0.56	659	375	776
36	3	33	36	4	32	802.1	630.487	0.96	659	375	776
36	3	33	35	4	32	771.7	630.487	0.35	659	375	777
36	4	32	37	5	33	848.3	682.919	0.47	628	363	728

36	4	32	36	5	31	817.0	682.919	0.74	628	363	728
36	4	32	35	5	31	786.7	682.919	0.26	629	363	730
36	5	31	37	6	32	862.8	750.307	0.37	597	354	689
36	5	31	36	6	30	831.5	750.307	0.54	597	354	690
36	5	31	35	6	30	801.1	750.307	0.18	598	355	692
36	6	30	37	7	31	876.9	832.185	0.27	571	349	666
36	6	30	36	7	29	845.7	832.185	0.37	571	349	666
36	6	30	35	7	29	815.3	832.185	0.12	573	350	669
36	7	29	37	8	30	890.7	928.213	0.18	553	347	652
36	7	29	36	8	28	859.5	928.213	0.23	553	347	652
36	7	29	35	8	28	829.0	928.213	0.07	555	348	655
36	8	28	37	9	29	904.2	1038.030	0.11	543	346	645
36	8	28	36	9	27	872.9	1038.030	0.14	542	346	645
36	8	28	35	9	27	842.4	1038.030	0.04	544	347	648
36	9	27	37	10	28	917.2	1161.253	0.07	538	346	643
36	9	27	36	10	26	885.9	1161.253	0.08	539	347	645
36	9	27	35	10	26	855.4	1161.253	0.02	539	347	646
36	10	26	37	11	27	929.8	1297.483	0.04	536	346	642
36	10	26	36	11	25	898.5	1297.483	0.04	543	348	651
36	10	26	35	11	25	868.0	1297.483	0.01	538	347	645
37	1	37	38	2	36	817.0	591.349	0.23	715	405	859
37	1	37	37	2	36	780.8	591.349	0.87	672	383	807
37	1	37	36	2	34	753.2	591.349	0.18	713	404	857
37	2	36	38	3	35	821.0	622.477	0.49	683	385	812
37	2	36	37	3	35	788.6	622.477	1.01	687	386	812
37	2	36	36	3	33	757.7	622.477	0.35	682	385	812
37	3	35	38	4	34	834.4	661.463	0.49	663	376	776
37	3	35	37	4	34	802.3	661.463	0.85	664	376	777
37	3	35	36	4	32	771.1	661.463	0.31	663	376	777
37	4	34	38	5	33	849.1	714.133	0.42	628	363	726
37	4	34	37	5	33	817.0	714.133	0.66	629	363	728
37	4	34	36	5	31	785.8	714.133	0.23	629	363	728
37	5	33	38	6	32	863.6	781.529	0.32	596	354	687
37	5	33	37	6	32	831.5	781.529	0.48	597	355	689
37	5	33	36	6	30	800.3	781.529	0.16	597	354	689
37	6	32	38	7	31	877.8	863.418	0.24	570	349	663
37	6	32	37	7	31	845.7	863.418	0.33	572	350	666
37	6	32	36	7	29	814.4	863.418	0.11	571	349	666
37	7	31	38	8	30	891.6	959.461	0.16	552	347	649
37	7	31	37	8	30	859.5	959.461	0.21	554	347	652
37	7	31	36	8	28	828.2	959.461	0.06	553	347	652
37	8	30	38	9	29	905.0	1069.298	0.10	542	346	642
37	8	30	37	9	29	872.9	1069.298	0.12	543	346	645
37	8	30	36	9	27	841.6	1069.298	0.04	543	346	646
37	9	29	38	10	28	918.1	1192.543	0.06	537	346	641
37	9	29	37	10	28	885.9	1192.543	0.07	538	346	642
37	9	29	36	10	26	854.6	1192.543	0.02	539	347	645
37	10	28	38	11	27	930.7	1328.800	0.03	538	347	644
37	10	28	37	11	27	898.5	1328.800	0.04	534	346	639
37	10	28	36	11	25	867.2	1328.800	0.01	541	347	649
38	0	38	39	1	39	784.2	620.527	1.48	637	372	764
38	0	38	38	1	37	768.7	620.527	1.05	721	409	867
38	0	38	37	1	37	720.5	620.527	1.29	638	373	765
38	1	37	39	2	38	797.2	639.595	0.66	714	402	854

38	1	37	38	2	36	768.7	639.595	1.42	711	402	847
38	1	37	37	2	36	732.5	639.595	0.53	715	402	855
38	2	36	39	3	37	817.4	658.680	0.46	698	393	825
38	2	36	38	3	35	784.8	658.680	0.94	692	391	821
38	2	36	37	3	35	752.4	658.680	0.33	698	393	824
38	3	35	39	4	36	834.9	693.849	0.43	659	374	774
38	3	35	38	4	34	802.0	693.849	0.75	659	374	775
38	3	35	37	4	34	769.9	693.849	0.27	659	375	775
38	4	34	39	5	35	849.9	746.205	0.36	627	363	724
38	4	34	38	5	33	817.0	746.205	0.58	627	363	724
38	4	34	37	5	33	785.0	746.205	0.21	628	363	726
38	5	33	39	6	34	864.5	813.593	0.28	595	354	684
38	5	33	38	6	32	831.5	813.593	0.42	595	354	685
38	5	33	37	6	32	799.5	813.593	0.14	596	354	687
38	6	32	39	7	33	878.6	895.492	0.21	569	349	660
38	6	32	38	7	31	845.7	895.492	0.29	569	349	660
38	6	32	37	7	31	813.6	895.492	0.09	570	349	663
38	7	31	39	8	32	892.5	991.551	0.14	551	346	646
38	7	31	38	8	30	859.5	991.551	0.18	551	346	646
38	7	31	37	8	30	827.4	991.551	0.06	552	347	649
38	8	30	39	9	31	905.9	1101.407	0.09	541	345	639
38	8	30	38	9	29	872.9	1101.407	0.11	540	345	639
38	8	30	37	9	29	840.8	1101.407	0.03	542	346	642
38	9	29	39	10	30	918.9	1224.676	0.05	535	345	636
38	9	29	38	10	28	885.9	1224.676	0.06	536	346	638
38	9	29	37	10	28	853.8	1224.676	0.02	536	346	639
38	10	28	39	11	29	931.6	1360.959	0.03	533	345	635
38	10	28	38	11	27	898.5	1360.959	0.03	538	347	642
38	10	28	37	11	27	866.4	1360.959	0.01	534	346	638
39	1	39	40	2	38	820.4	655.122	0.16	717	405	861
39	1	39	39	2	38	781.7	655.122	0.66	670	382	804
39	1	39	38	2	36	753.2	655.122	0.13	715	405	859
39	2	38	40	3	37	823.1	687.178	0.37	682	385	809
39	2	38	39	3	37	788.9	687.178	0.78	687	386	811
39	2	38	38	3	35	756.3	687.178	0.26	682	385	810
39	3	37	40	4	36	836.1	726.419	0.37	663	375	775
39	3	37	39	4	36	802.3	726.419	0.66	664	376	776
39	3	37	38	4	34	769.4	726.419	0.24	664	375	776
39	4	36	40	5	35	850.8	779.097	0.32	626	362	723
39	4	36	39	5	35	817.1	779.097	0.51	627	363	725
39	4	36	38	5	33	784.1	779.097	0.18	627	363	725
39	5	35	40	6	34	865.3	846.498	0.25	594	354	682
39	5	35	39	6	34	831.6	846.498	0.37	595	354	684
39	5	35	38	6	32	798.6	846.498	0.13	595	354	684
39	6	34	40	7	33	879.5	928.406	0.18	568	349	657
39	6	34	39	7	33	845.7	928.406	0.25	570	349	660
39	6	34	38	7	31	812.8	928.406	0.08	569	349	660
39	7	33	40	8	32	893.3	1024.481	0.12	550	346	643
39	7	33	39	8	32	859.5	1024.481	0.16	552	346	646
39	7	33	38	8	30	826.6	1024.481	0.05	552	346	646
39	8	32	40	9	31	906.8	1134.357	0.08	540	345	636
39	8	32	39	9	31	872.9	1134.357	0.09	541	345	639
39	8	32	38	9	29	840.0	1134.357	0.03	541	346	639
39	9	31	40	10	30	919.8	1257.650	0.04	535	345	634

39	9	31	39	10	30	886.0	1257.650	0.05	535	345	636
39	9	31	38	10	28	853.0	1257.650	0.01	536	346	638
39	10	30	40	11	29	932.5	1393.961	0.02	534	345	636
39	10	30	39	11	29	898.6	1393.961	0.03	532	345	634
39	10	30	38	11	27	865.5	1393.961	0.01	537	346	641
40	0	40	41	1	41	785.6	686.212	1.16	633	370	758
40	0	40	40	1	39	770.1	686.212	0.76	720	407	864
40	0	40	39	1	39	718.6	686.212	1.01	633	371	759
40	1	39	41	2	40	798.2	706.704	0.52	714	401	853
40	1	39	40	2	38	768.8	706.704	1.09	711	402	846
40	1	39	39	2	38	730.1	706.704	0.42	714	401	854
40	2	38	41	3	39	818.5	725.884	0.35	699	392	825
40	2	38	40	3	37	784.4	725.884	0.73	692	390	819
40	2	38	39	3	37	750.2	725.884	0.25	699	393	825
40	3	37	41	4	38	836.5	760.598	0.32	659	374	772
40	3	37	40	4	36	801.9	760.598	0.58	658	374	772
40	3	37	39	4	36	768.1	760.598	0.21	659	374	773
40	4	36	41	5	37	851.6	812.857	0.27	625	362	721
40	4	36	40	5	35	817.0	812.857	0.45	625	362	721
40	4	36	39	5	35	783.3	812.857	0.16	626	362	723
40	5	35	41	6	36	866.2	880.244	0.21	593	353	678
40	5	35	40	6	34	831.6	880.244	0.32	592	353	679
40	5	35	39	6	34	797.8	880.244	0.11	594	354	682
40	6	34	41	7	35	880.4	962.162	0.15	567	348	654
40	6	34	40	7	33	845.7	962.162	0.22	567	348	654
40	6	34	39	7	33	812.0	962.162	0.07	568	349	657
40	7	33	41	8	34	894.2	1058.252	0.10	549	346	640
40	7	33	40	8	32	859.5	1058.252	0.14	549	346	640
40	7	33	39	8	32	825.8	1058.252	0.04	550	346	643
40	8	32	41	9	33	907.6	1168.149	0.07	538	345	633
40	8	32	40	9	31	873.0	1168.149	0.08	538	345	633
40	8	32	39	9	31	839.2	1168.149	0.03	540	345	636
40	9	31	41	10	32	920.7	1291.467	0.04	532	344	630
40	9	31	40	10	30	886.0	1291.467	0.05	533	345	632
40	9	31	39	10	30	852.1	1291.467	0.01	534	345	633
40	10	30	41	11	31	933.3	1427.806	0.02	530	344	629
40	10	30	40	11	29	898.6	1427.806	0.02	534	345	635
40	10	30	39	11	29	864.7	1427.806	0.01	531	345	632