

Toward the detection of cyanoketene in the interstellar medium: new hints from quantum chemistry and rotational spectroscopy

Bernardo Ballotta,^{*,†} Tainah D. Marforio,[‡] Sergio Rampino,[¶] Mattia Melosso,[‡] Vincenzo Barone,[§] Emilio Martínez-Núñez,^{||} Andrea Bottoni,[‡] and Luca Dore^{*,‡}

[†]*Scuola Normale Superiore, Piazza dei Cavalieri 7, 56126 Pisa, Italy.*

[‡]*Dipartimento di Chimica "Giacomo Ciamician", Università di Bologna, Via F. Selmi 2, 40126 Bologna, Italy.*

[¶]*Università degli Studi di Padova, Dipartimento di Scienze Chimiche, Via Marzolo 1, 35131 Padova, Italy. Also at: Istituto Nazionale di Fisica Nucleare, Sezione di Pisa, Largo Bruno Pontecorvo 3, 56127 Pisa, Italy.*

[§]*Scuola Normale Superiore, Piazza dei Cavalieri 7, 56126 Pisa, Italy. Also at: Istituto Nazionale di Fisica Nucleare, Sezione di Pisa, Largo Bruno Pontecorvo 3, 56127 Pisa, Italy.*

^{||}*Departamento de Química Física, Facultad de Química, Campus Vida, Universidade de Santiago de Compostela, Avda. das Ciencias s/n, 15782, Santiago de Compostela, Spain.*

E-mail: bernardo.ballotta@sns.it; luca.dore@unibo.it

Contents

Supporting Information	5
Rx1	5
Cartesian coordinates	5
Mulliken charges and spin densities	6
MIN1	6
Cartesian coordinates	6
Mulliken charges and spin densities	7
MIN2	7
Cartesian coordinates	7
Mulliken charges and spin densities	8
MIN3	8
Cartesian coordinates	8
Mulliken charges and spin densities	9
TS1	9
Cartesian coordinates	9
Mulliken charges and spin densities	10
TS2	10
Cartesian coordinates	10
Mulliken charges and spin densities	11
TS3	11
Cartesian coordinates	11
Mulliken charges and spin densities	12

TS4	12
Cartesian coordinates	12
Mulliken charges and spin densities	13
TS5	13
Cartesian coordinates	13
Mulliken charges and spin densities	14
TS6	14
Cartesian coordinates	14
Mulliken charges and spin densities	15
TS7	15
Cartesian coordinates	15
Mulliken charges and spin densities	16
TS8	16
Cartesian coordinates	16
Mulliken charges and spin densities	17
P1	17
Cartesian coordinates	17
Mulliken charges and spin densities	18
P2	18
Cartesian coordinates	18
Mulliken charges and spin densities	19
P3	19
Cartesian coordinates	19
Mulliken charges and spin densities	20

FIT output	20
MESS input file	69
MESS output file	83

Supporting Information

Here are reported the cartesian coordinates, the Mulliken charges and spin densities of each optimized structures. Finally, a re-formatted version of the FIT output is listed.

Rx1

Cartesian coordinates

HC₂N (Cyanocarbene radical)

Table S 1: Cartesian coordinates in Å of the cyanocarbene radical structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
C	-0.510494	1.075799	0.000471
N	0.645245	1.202235	0.126908
C	-1.848730	0.992934	-0.082394
H	-2.626710	0.471035	-0.604292

HCO (Formyl radical)

Table S 2: Cartesian coordinates in Å of the formyl radical structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
C	0.049418	2.230307	-0.000000
O	1.228273	2.215265	0.000000
H	-0.577016	3.158679	-0.000000

Mulliken charges and spin densities

HC₂N (Cyanocarbene radical)

Table S 3: Partial charge and spin density distribution of the cyanide radical optimized structure computed at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	Partial charge	Spin density
C	0.335239	0.032574
N	-0.214071	0.262993
C	-0.369320	1.673501
H	0.248152	0.030932

HCO (Formyl radical)

Table S 4: Partial charge and spin density distribution of the formyl radical optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
C	0.048438	0.699980
O	-0.233418	0.207643
H	0.184980	0.092377

MIN1

Cartesian coordinates

MIN1

Table S 5: Cartesian coordinates in Å of MIN1 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	-0.817415	1.474065	0.000072
H	-2.182009	-0.949058	-0.000049
O	-2.189131	0.028862	-0.000034
C	1.372056	-0.122365	0.000001
C	-0.929865	0.391393	0.000027
C	0.058417	-0.597573	0.000048
N	2.501261	0.173626	-0.000030

Mulliken charges and spin densities

MIN1

Table S 6: Partial charge and spin density distribution of the MIN1 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.248767	0.004159
H	0.240414	0.001461
O	-0.225868	0.111036
C	0.436605	0.000242
C	0.090584	0.365438
C	-0.480301	0.416139
N	-0.310202	0.101525

MIN2

Cartesian coordinates

MIN2

Table S 7: Cartesian coordinates in Å of MIN2 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	0.740266	-1.483484	0.000000
H	0.262437	1.619943	0.000000
O	2.234471	-0.119195	0.000000
C	-1.349121	0.183922	0.000000
C	1.068673	-0.430022	0.000000
C	0.000000	0.570686	0.000000
N	-2.456540	-0.161488	0.000000

Mulliken charges and spin densities

MIN2

Table S 8: Partial charge and spin density distribution of the MIN2 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.223361	0.000216
H	0.196381	0.009077
O	-0.396708	0.090424
C	0.230955	0.006858
C	0.047996	0.038405
C	-0.047783	0.723027
N	-0.254202	0.131992

MIN3

Cartesian coordinates

MIN3

Table S 9: Cartesian coordinates in Å of MIN3 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	-0.032076	1.648439	-0.877688
H	-0.032076	1.648439	0.877688
O	1.597633	-0.852578	0.000000
C	-1.131867	0.076671	0.000000
C	1.360774	0.300842	0.000000
C	0.000000	1.000790	0.000000
N	-2.012905	-0.678008	0.000000

Mulliken charges and spin densities

MIN3

Table S 10: Partial charge and spin density distribution of the MIN3 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.248270	-0.002611
H	0.248270	-0.002611
O	-0.267244	0.196521
C	0.220847	0.010110
C	0.061382	0.722521
C	-0.253285	0.062816
N	-0.258240	0.013253

TS1

Cartesian coordinates

TS1

Table S 11: Cartesian coordinates in Å of TS1 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	1.904552	-1.490856	-0.000005
H	1.489168	1.454186	0.000045
O	2.145690	0.738708	0.000035
C	-1.417567	-0.023315	0.000001
C	1.023446	-0.890892	0.000000
C	-0.136183	-0.549226	-0.000000
N	-2.482941	0.415239	0.000003

Mulliken charges and spin densities

TS1

Table S 12: Partial charge and spin density distribution of the TS1 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.295131	0.005113
H	0.211937	0.011379
O	-0.307763	0.820277
C	-0.533307	0.000996
C	-0.168837	0.026190
C	0.661325	0.116113
N	-0.158485	0.019932

TS2

Cartesian coordinates

TS2

Table S 13: Cartesian coordinates in Å of TS2 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	1.093286	1.609886	-0.000256
H	1.324690	-1.097281	0.000046
O	2.137997	-0.163688	-0.000130
C	-1.370222	-0.092199	-0.000019
C	1.056394	0.523727	-0.000131
C	-0.003398	-0.404577	0.000043
N	-2.517316	0.091822	-0.000060

Mulliken charges and spin densities

TS2

Table S 14: Partial charge and spin density distribution of the TS2 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.272810	0.001672
H	0.327534	0.000622
O	-0.346328	0.157824
C	0.103050	0.005532
C	0.114607	0.170994
C	-0.197214	0.556688
N	-0.274460	0.106668

TS3

Cartesian coordinates

TS3

Table S 15: Cartesian coordinates in Å of TS3 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	-0.800540	0.632836	1.177799
H	0.363810	1.816216	-0.857512
O	-1.970616	-0.516569	-0.357761
C	1.349755	0.107821	-0.066293
C	-1.428344	0.015558	0.498916
C	0.359705	1.087911	-0.048335
N	2.089482	-0.790867	0.029066

Mulliken charges and spin densities

TS3

Table S 16: Partial charge and spin density distribution of the TS3 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.405302	0.013131
H	0.179398	0.010170
O	-0.114827	0.016448
C	0.349773	0.008044
C	0.174705	0.034363
C	-0.704129	0.774234
N	-0.290223	0.143611

TS4

Cartesian coordinates

TS4

Table S 17: Cartesian coordinates in Å of TS4 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	0.056263	1.755196	0.199319
H	0.410123	-1.432837	0.719744
O	2.231259	-0.278273	-0.102651
C	-1.324377	0.085270	-0.013085
C	1.105673	-0.007942	0.023879
C	-0.047242	0.685173	0.062290
N	-2.388684	-0.381595	-0.076623

Mulliken charges and spin densities

TS4

Table S 18: Partial charge and spin density distribution of the TS4 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.179269	0.010758
H	0.072006	0.826727
O	-0.286309	0.064758
C	0.142907	0.013374
C	0.297839	0.055368
C	-0.130507	0.027147
N	-0.275206	0.001870

TS5

Cartesian coordinates

TS5

Table S 19: Cartesian coordinates in Å of TS5 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	1.784125	1.444221	0.881891
H	-0.053485	1.860543	-0.274182
O	1.937014	-0.694667	-0.031242
C	-1.268953	0.064630	-0.010548
C	1.110051	0.120559	-0.016937
C	-0.053480	0.792308	-0.133621
N	-2.272954	-0.513450	0.083515

Mulliken charges and spin densities

TS5

Table S 20: Partial charge and spin density distribution of the TS5 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.041226	0.822337
H	0.197650	-0.001596
O	-0.262678	0.065067
C	0.154752	0.037701
C	0.270018	0.032335
C	-0.124005	0.035368
N	-0.276964	0.008787

TS6

Cartesian coordinates

TS6

Table S 21: Cartesian coordinates in Å of TS6 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	0.238927	1.725558	0.917294
H	0.238943	1.725580	-0.917259
O	-1.701397	-0.819231	-0.000029
C	1.216917	0.057792	0.000006
C	-1.570124	0.316978	-0.000015
C	0.310587	1.156336	0.000011
N	1.912305	-0.868298	0.000001

Mulliken charges and spin densities

TS6

Table S 22: Partial charge and spin density distribution of the TS6 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.233570	0.005997
H	0.233570	0.005997
O	-0.150931	0.068685
C	0.259083	0.004613
C	0.075221	0.211548
C	-0.412399	0.614163
N	-0.238115	0.088998

TS7

Cartesian coordinates

TS7

Table S 23: Cartesian coordinates in Å of TS7 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	0.084897	1.607176	-0.850573
H	-0.124555	1.772434	1.205845
O	2.130721	-0.558987	0.064571
C	-1.235646	0.061316	-0.090532
C	1.135590	-0.011821	-0.143442
C	0.019536	0.747944	-0.192772
N	-2.261060	-0.473467	0.006902

Mulliken charges and spin densities

TS7

Table S 24: Partial charge and spin density distribution of the TS7 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.244896	0.007671
H	-0.039801	0.809100
O	-0.217774	0.025336
C	0.127413	0.075959
C	0.193877	0.182597
C	-0.056328	-0.085733
N	-0.252283	-0.014929

TS8

Cartesian coordinates

TS8

Table S 25: Cartesian coordinates in Å of TS8 structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	-0.095004	1.918450	-0.275458
H	0.970493	1.067638	0.961130
O	1.803932	-0.777097	-0.021369
C	-1.229361	0.071668	-0.030966
C	1.259765	0.285621	-0.031874
C	-0.028238	0.858848	-0.074282
N	-2.187452	-0.579771	0.043758

Mulliken charges and spin densities

TS8

Table S 26: Partial charge and spin density distribution of the TS8 optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.242878	-0.000727
H	0.225736	0.060713
O	-0.338232	0.251341
C	0.242096	0.020561
C	-0.012906	0.493112
C	-0.106792	0.144094
N	-0.252779	0.030905

P1

Cartesian coordinates

HC₃ON (Cyanoketene)

Table S 27: Cartesian coordinates in Å of the cyanoketene structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
C	-1.262431	0.105908	0.000000
N	-2.308669	-0.403633	0.000000
C	0.000000	0.752940	0.000000
H	0.082270	1.830772	0.000000
C	1.124151	0.044192	0.000000
O	2.113512	-0.552949	0.000000

H (H)

Table S 28: Cartesian coordinates in Å of the H structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
H	0.185590	0.027293	0.000000

Mulliken charges and spin densities

H (H)

Table S 29: Partial charge and spin density distribution of the H optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
H	0.000000	1.000000

P2

Cartesian coordinates

CO (Carbon monoxide)

Table S 30: Cartesian coordinates in Å of the cyanoketene structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
C	0.000000	0.000000	-0.647297
O	0.000000	0.000000	0.485473

H₂C₂N (Cyanomethyl radical)

Table S 31: Cartesian coordinates in Å of the cyanomethyl radical structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
C	0.000000	0.000000	0.196613
N	0.000000	0.000000	1.357475
C	-0.000000	-0.000000	-1.201441
H	0.000000	0.936585	-1.736677
H	-0.000000	-0.936585	-1.736677

Mulliken charges and spin densities

CO (Carbon Monoxide)

Table S 32: Partial charge and spin density distribution of the carbon monoxide optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
C	0.117816	
O	-0.117816	

H₂C₂N (Cyanomethyl radical)

Table S 33: Partial charge and spin density distribution of the H optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
C	0.262404	0.015682
N	-0.213136	0.137602
C	-0.446485	0.824627
H	0.198608	0.011044
H	0.198608	0.011044

P3

Cartesian coordinates

OH (Hydroxyl radical)

Table S 34: Cartesian coordinates in Å of the cyanoketene structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
O	0.000000	0.000000	0.107968
H	-0.000000	-0.000000	-0.863741

HC₃N (Cyanoacetylene)

Table S 35: Cartesian coordinates in Å of the cyanoacetylene radical structure optimized at rev-DSDPBEP86-GD3BJ/jun-cc-pVTZ level of theory.

Atom	X	Y	Z
C	0.000000	0.000000	0.741212
N	0.000000	0.000000	1.906579
C	0.000000	0.000000	-0.635552
C	0.000000	0.000000	-1.845001
H	0.000000	0.000000	-2.910009

Mulliken charges and spin densities

OH (Hydroxyl radical)

Table S 36: Partial charge and spin density distribution of the hydroxyl radical optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
O	-0.220617	0.988211
H	0.220617	0.011789

HC₃N (Cyanoacetylene)

Table S 37: Partial charge and spin density distribution of the cyanoacetylene optimized structure computed at CCSD(T)/cc-pVTZ level of theory.

Atom	Partial charge	Spin density
C	-0.007666	0.000000
N	-0.150486	0.000000
C	0.255508	0.000000
C	-0.434309	0.000000
H	0.336954	0.000000

FIT output

							obs	o-c	error	blends	Notes	
										o-c	wt	
/ instead of : below denotes (o-c)>3*err												
! Hahn+04												
1:	2	0	2	1	0	1	10750.0150	0.0423	0.030			
2:	41	5	36	42	4	39	13562.3430	-0.0014	0.030			
3:	10	2	9	11	1	10	13597.6470	-0.0042	0.030			
4:	16	2	14	17	1	17	14095.9790	0.0201	0.030			
5:	34	2	33	33	3	30	14119.0140	0.0055	0.030			
6:	15	1	14	14	2	13	14151.4800	0.0174	0.030			
7:	3	1	3	2	1	2	15754.4830	0.0189	0.030			
8:	3	0	3	2	0	2	16120.6380	0.0709	0.030			
9:	15	2	13	16	1	16	16152.6700	0.0224	0.030			
10:	3	1	2	2	1	1	16499.6840	0.0256	0.030			
11:	9	2	8	10	1	9	20275.6660	-0.0677	0.030			
12/	67	6	61	66	7	60	20600.1100	0.0928	0.030			
13:	4	1	4	3	1	3	21003.8340	0.0032	0.030			
14:	50	3	47	51	2	50	21031.5500	0.0353	0.030			
15:	4	0	4	3	0	3	21485.9140	0.0172	0.030			
16:	4	2	3	3	2	2	21505.4860	0.0562	0.030			
17:	4	3	1	3	3	0	21514.8230	0.0033	0.030	0.0257	0.50	
18:	4	3	2	3	3	1	21514.8230	0.0480	0.030	0.0257	0.50	
19:	4	2	2	3	2	1	21522.6540	0.0348	0.030			
20:	24	2	22	24	2	23	21618.4210	0.0195	0.030			
21:	21	3	18	22	2	21	21798.9060	0.0219	0.030			
22:	30	4	26	31	3	29	21944.2940	0.0203	0.030			
23:	4	1	3	3	1	2	21997.3290	0.0231	0.030			
24:	12	2	10	13	1	13	24140.2430	0.0441	0.030			
25:	26	2	24	25	3	23	24995.9380	0.0051	0.030			
26:	9	0	9	8	1	8	25446.2060	0.0480	0.030			
27:	28	4	25	29	3	26	25867.2130	0.0070	0.030			
28:	5	1	5	4	1	4	26251.4180	0.0153	0.030			
29:	38	5	34	39	4	35	26325.1300	0.0046	0.030			
30:	51	3	48	52	2	51	26338.6800	0.0150	0.030			
31:	47	4	43	46	5	42	26582.9400	0.0507	0.030			
32:	48	6	43	49	5	44	26615.9900	-0.0110	0.030			
33:	68	6	62	67	7	61	26815.3600	0.0706	0.030			
34:	8	2	7	9	1	8	26843.9420	0.0575	0.030			
35:	5	0	5	4	0	4	26844.2350	0.0139	0.030			
36:	5	4	2	4	4	1	26900.7680	0.0155	0.030	0.0154	0.50	
37:	5	4	1	4	4	0	26900.7680	0.0152	0.030	0.0154	0.50	
38:	1	1	0	1	0	1	27034.9090	0.0339	0.030			
39:	31	2	29	32	1	32	27035.7970	0.0152	0.030			
40:	2	1	1	2	0	2	27285.5290	0.0582	0.030			
41:	5	1	4	4	1	3	27493.0090	-0.0042	0.030			
42:	3	1	2	3	0	3	27664.6060	0.0439	0.030			
43:	50	4	47	49	5	44	27684.2600	0.0277	0.030			
44:	5	1	4	5	0	5	28824.7610	-0.0023	0.030			
45:	6	1	5	6	0	6	29617.2250	0.0141	0.030			
46:	6	1	6	5	1	5	31496.7830	0.0228	0.030			
47:	8	1	7	8	0	8	31663.8030	-0.0167	0.030			
48:	1	1	1	0	0	0	32162.3440	0.0281	0.030			
49:	6	0	6	5	0	5	32193.8890	0.0672	0.030			
50:	6	2	4	5	2	3	32311.7000	-0.0308	0.030			
51:	37	5	33	38	4	34	32416.5050	0.0036	0.030			
52:	51	4	48	50	5	45	32454.8400	0.0482	0.030			
53:	10	1	9	10	0	10	34387.1240	-0.0069	0.030			

54:	7	1	7	6	1	6	36739.4770	-0.0257	0.030		
55:	52	4	49	51	5	46	37100.8150	0.0261	0.030		
56:	2	1	2	1	0	1	37290.2080	0.0194	0.030		
57:	7	0	7	6	0	6	37533.0400	0.0197	0.030		
58:	7	2	6	6	2	5	37622.0670	0.0217	0.030		
59:	61	5	57	60	6	54	37622.9950	0.0382	0.030		
60:	17	1	16	17	1	17	37656.7860	0.0571	0.030		
61:	7	3	4	6	3	3	37658.1730	-0.0196	0.030		
62:	7	4	4	6	4	3	37663.2410	0.0309	0.030	0.0293	0.50
63:	7	4	3	6	4	2	37663.2410	0.0277	0.030	0.0293	0.50
64:	7	2	5	6	2	4	37717.9770	-0.0074	0.030		
65:	12	1	11	12	0	12	37870.4060	0.0191	0.030		
66:	46	6	41	47	5	42	38344.1400	-0.0179	0.030		
67:	56	7	50	57	6	51	38402.8960	-0.0215	0.030		
68:	36	5	32	37	4	33	38423.7370	-0.0040	0.030		
69:	26	4	23	27	3	24	38446.1790	0.0123	0.030		
70:	38	3	35	37	4	34	38449.1660	0.0214	0.030		
71:	7	1	6	6	1	5	38476.5590	0.0145	0.030		
72:	13	1	12	13	0	13	39924.3940	0.0182	0.030		
! Ballotta+21											
73:	16	0	16	15	0	15	84905.1330	-0.0028	0.015		
74:	16	2	15	15	2	14	85816.1200	-0.0052	0.015		
75:	16	4	13	15	4	12	86128.9890	-0.0045	0.015		
76:	16	4	12	15	4	11	86130.3140	-0.0097	0.015		
77:	16	5	12	15	5	11	86133.2310	-0.0003	0.015	-0.0076	0.50
78:	16	5	11	15	5	10	86133.2310	-0.0148	0.015	-0.0076	0.50
79:	16	3	14	15	3	13	86141.6640	-0.0045	0.015		
80:	16	6	11	15	6	10	86157.9080	-0.0035	0.015	-0.0036	0.50
81:	16	6	10	15	6	9	86157.9080	-0.0036	0.015	-0.0036	0.50
82:	16	7	9	15	7	8	86195.8780	-0.0069	0.015	-0.0070	0.50
83:	16	7	10	15	7	9	86195.8780	-0.0069	0.015	-0.0070	0.50
84:	16	3	13	15	3	12	86204.2010	-0.0022	0.015		
85:	16	8	8	15	8	7	86244.0280	-0.0024	0.015	-0.0024	0.50
86:	16	8	9	15	8	8	86244.0280	-0.0024	0.015	-0.0024	0.50
87:	16	10	6	15	10	5	86365.4400	-0.0036	0.015	-0.0037	0.50
88:	16	10	7	15	10	6	86365.4400	-0.0036	0.015	-0.0037	0.50
89:	16	11	5	15	11	4	86437.3260	0.0105	0.015		
90:	13	1	13	12	0	12	86669.8610	-0.0359	0.015		
91:	16	2	14	15	2	13	86898.1140	-0.0131	0.015		
92:	16	1	15	15	1	14	87654.1460	-0.0043	0.015		
93:	19	0	19	18	1	18	88689.6220	-0.0069	0.015		
94:	17	1	17	16	1	16	88954.8160	0.0000	0.015		
95:	17	0	17	16	0	16	90082.8650	-0.0031	0.015		
96:	14	1	14	13	0	13	90738.4420	0.0101	0.015		
97:	17	2	16	16	2	15	91149.9440	-0.0153	0.015		
98:	17	4	14	16	4	13	91518.8780	-0.0063	0.015		
99:	17	5	13	16	5	12	91519.6880	0.0029	0.015	-0.0097	0.50
100:	17	5	12	16	5	11	91519.6880	-0.0223	0.015	-0.0097	0.50
101:	17	4	13	16	4	12	91520.9170	-0.0088	0.015		
102:	17	3	15	16	3	14	91533.2460	-0.0123	0.015		
103:	17	6	12	16	6	11	91543.8200	-0.0018	0.015	-0.0019	0.50
104:	17	6	11	16	6	10	91543.8200	-0.0020	0.015	-0.0019	0.50
105:	2	2	0	1	1	1	91577.7030	-0.0257	0.015		
106:	17	7	11	16	7	10	91582.9170	-0.0154	0.015	-0.0155	0.50
107:	17	7	10	16	7	9	91582.9170	-0.0154	0.015	-0.0155	0.50
108:	17	3	14	16	3	13	91617.7410	-0.0171	0.015		
109:	17	8	10	16	8	9	91633.2920	0.0000	0.015	0.0001	0.50
110:	17	8	9	16	8	8	91633.2920	0.0000	0.015	0.0001	0.50
111:	17	9	9	16	9	8	91693.0810	-0.0206	0.015	-0.0206	0.50
112:	17	9	8	16	9	7	91693.0810	-0.0206	0.015	-0.0206	0.50
113:	17	10	8	16	10	7	91761.3720	0.0122	0.015	0.0122	0.50

114:	17	10	7	16	10	6	91761.3720	0.0122	0.015	0.0122	0.50
115:	13	2	12	13	1	13	92232.4330	0.0077	0.015		
116:	35	2	33	35	1	34	92237.4670	-0.0111	0.015		
117:	17	2	15	16	2	14	92424.3060	-0.0086	0.015		
118:	17	1	16	16	1	15	93079.0820	-0.0150	0.015		
119:	27	1	26	27	0	27	93747.6360	-0.0160	0.015		
120:	14	2	13	14	1	14	94028.8290	-0.0012	0.015		
121:	18	1	18	17	1	17	94150.7250	-0.0025	0.015		
122:	15	1	15	14	0	14	94787.7670	-0.0056	0.015		
123:	20	0	20	19	1	19	94876.6960	-0.0024	0.015		
124:	18	0	18	17	0	17	95245.0450	-0.0032	0.015		
125:	15	2	14	15	1	15	95958.0420	-0.0097	0.015		
126:	36	2	34	36	1	35	96097.3450	-0.0104	0.015		
127:	18	2	17	17	2	16	96478.5310	0.0046	0.015		
128:	26	1	25	25	2	24	96616.7120	-0.0039	0.015		
129:	18	5	14	17	5	13	96906.6820	-0.0153	0.015	-0.0366	0.50
130:	18	5	13	17	5	12	96906.6820	-0.0579	0.015	-0.0366	0.50
131:	18	4	15	17	4	14	96909.9110	-0.0093	0.015		
132/	18	4	14	17	4	13	96912.9240	-0.0500	0.015		
133:	18	3	16	17	3	15	96925.1440	-0.0008	0.015		
134:	18	6	13	17	6	12	96929.9150	-0.0005	0.015	-0.0007	0.50
135:	18	6	12	17	6	11	96929.9150	-0.0008	0.015	-0.0007	0.50
136:	18	7	11	17	7	10	96969.9410	0.0007	0.015	0.0007	0.50
137:	18	7	12	17	7	11	96969.9410	0.0007	0.015	0.0007	0.50
138:	18	8	10	17	8	9	97022.3670	-0.0035	0.015	-0.0035	0.50
139:	18	8	11	17	8	10	97022.3670	-0.0035	0.015	-0.0035	0.50
140:	18	3	15	17	3	14	97037.2270	-0.0149	0.015		
141:	22	5	18	21	5	17	118460.9180	0.0047	0.015		
142:	22	5	17	21	5	16	118461.1530	-0.0244	0.015		
143:	22	6	17	21	6	16	118476.3030	-0.0010	0.015	-0.0027	0.50
144:	22	6	16	21	6	15	118476.3030	-0.0044	0.015	-0.0027	0.50
145:	22	4	19	21	4	18	118485.9260	0.0058	0.015		
146:	22	3	20	21	3	19	118489.8720	0.0021	0.015		
147:	22	4	18	21	4	17	118498.3620	-0.0043	0.015		
148:	22	7	15	21	7	14	118517.5090	0.0066	0.015	0.0067	0.50
149:	22	7	16	21	7	15	118517.5090	0.0066	0.015	0.0067	0.50
150:	23	2	22	22	2	21	123033.6370	0.0003	0.015		
151:	23	5	19	22	5	18	123851.1280	-0.0179	0.015		
152:	23	5	18	22	5	17	123851.5340	-0.0069	0.015		
153:	23	6	18	22	6	17	123863.4590	0.0113	0.015	0.0086	0.50
154:	23	6	17	22	6	16	123863.4590	0.0057	0.015	0.0086	0.50
155:	23	3	21	22	3	20	123878.6410	-0.0119	0.015		
156:	23	4	20	22	4	19	123882.8580	-0.0200	0.015		
157:	23	4	19	22	4	18	123899.8380	0.0045	0.015		
158:	23	7	16	22	7	15	123904.2620	0.0061	0.015	0.0062	0.50
159:	23	7	17	22	7	16	123904.2620	0.0062	0.015	0.0062	0.50
160/	24	0	24	23	0	23	125981.9860	-0.0457	0.015		
161:	46	7	40	45	7	39	247771.1950	0.1776	0.020	-0.0295	0.50
162:	46	7	39	45	7	38	247771.1950	-0.2367	0.020	-0.0295	0.50
163:	46	8	39	45	8	38	247791.4870	0.0194	0.020	0.0137	0.50
164:	46	8	38	45	8	37	247791.4870	0.0078	0.020	0.0137	0.50
165:	46	6	41	45	6	40	247843.6510	-0.0347	0.020		
166:	46	6	40	45	6	39	247854.2180	-0.0143	0.020		
167:	46	9	37	45	9	36	247874.5850	0.0048	0.020		
168:	46	4	43	45	4	42	247977.7790	0.0133	0.020		
169:	46	10	36	45	10	35	248002.9870	-0.0347	0.020	-0.0347	0.50
170:	46	10	37	45	10	36	248002.9870	-0.0347	0.020	-0.0347	0.50
171:	47	7	41	46	7	40	253154.6200	-0.0253	0.020		
172:	47	7	40	46	7	39	253155.1900	0.0008	0.020		
173:	47	7	40	46	7	39	253155.1920	0.0028	0.020		
174:	47	8	39	46	8	38	253169.6480	-0.0092	0.020		

175:	47	8	39	46	8	38	253169.6500	-0.0072	0.020		
176:	47	6	42	46	6	41	253237.4430	-0.0183	0.020		
177:	48	2	47	47	2	46	253267.6040	-0.0082	0.020		
178:	48	2	46	47	2	45	260244.2920	0.0002	0.020		
179:	48	4	44	47	4	43	260709.3260	-0.0025	0.020		
180:	49	3	47	48	3	46	262283.9120	0.0067	0.020		
181:	48	3	45	47	3	44	262760.8080	0.0178	0.020		
182:	50	2	49	49	2	48	263528.8870	-0.0121	0.020		
183:	51	1	51	50	1	50	263641.2050	-0.0081	0.020		
184:	51	0	51	50	0	50	263664.0490	0.0074	0.020		
185:	49	7	43	48	7	42	263921.2370	0.0064	0.020		
186:	49	7	42	48	7	41	263922.1480	-0.0018	0.020		
187:	49	8	42	48	8	41	263924.2050	-0.0024	0.020	-0.0170	0.50
188:	49	8	41	48	8	40	263924.2050	-0.0316	0.020	-0.0170	0.50
189:	49	9	41	48	9	40	264000.0440	0.0027	0.020	0.0024	0.50
190:	49	9	40	48	9	39	264000.0440	0.0020	0.020	0.0024	0.50
191:	49	6	44	48	6	43	264025.5100	-0.0065	0.020		
192:	49	6	43	48	6	42	264046.0180	-0.0022	0.020		
193:	49	4	46	48	4	45	264056.4920	-0.0172	0.020		
194:	50	1	49	49	1	48	264095.8910	-0.0178	0.020		
195:	49	10	39	48	10	38	264127.8400	-0.0152	0.020	-0.0152	0.50
196:	49	10	40	48	10	39	264127.8400	-0.0152	0.020	-0.0152	0.50
197:	49	5	45	48	5	44	264225.6410	-0.0076	0.020		
198:	49	12	37	48	12	36	264496.9110	-0.0127	0.020	-0.0127	0.50
199:	49	12	38	48	12	37	264496.9110	-0.0127	0.020	-0.0127	0.50
200:	49	5	44	48	5	43	264521.8850	0.0082	0.020		
201:	49	13	36	48	13	35	264726.4110	-0.0034	0.020	-0.0034	0.50
202:	49	13	37	48	13	36	264726.4110	-0.0034	0.020	-0.0034	0.50
203:	49	14	35	48	14	34	264981.1320	-0.0058	0.020	-0.0059	0.50
204:	49	14	36	48	14	35	264981.1320	-0.0058	0.020	-0.0059	0.50
205:	49	15	34	48	15	33	265258.7720	0.0073	0.020	0.0073	0.50
206:	49	15	35	48	15	34	265258.7720	0.0073	0.020	0.0073	0.50
207:	49	2	47	48	2	46	265376.7950	-0.0014	0.020		
208:	49	16	33	48	16	32	265557.5590	0.0484	0.020	0.0484	0.50
209:	49	16	34	48	16	33	265557.5590	0.0484	0.020	0.0484	0.50
210:	49	4	45	48	4	44	266291.2290	0.0048	0.020		
211:	50	3	48	49	3	47	267508.3920	-0.0059	0.020		
212:	49	3	46	48	3	45	268220.3480	0.0013	0.020		
213:	51	2	50	50	2	49	268653.7120	0.0110	0.020		
214:	52	1	52	51	1	51	268743.4970	0.0066	0.020		
215:	52	0	52	51	0	51	268763.1030	-0.0156	0.020		
216:	53	4	50	52	4	49	285405.2840	0.0028	0.020		
217:	53	8	45	52	8	44	285425.8320	-0.0457	0.020		
218:	53	7	47	52	7	46	285451.4210	-0.0060	0.020		
219:	53	7	46	52	7	45	285453.8680	-0.0118	0.020		
220:	53	9	44	52	9	43	285488.2700	-0.0085	0.020		
221:	53	6	48	52	6	47	285602.4270	0.0129	0.020		
222:	53	10	44	52	10	43	285612.7010	-0.0180	0.020	-0.0181	0.50
223:	53	10	43	52	10	42	285612.7010	-0.0181	0.020	-0.0181	0.50
224:	53	6	47	52	6	46	285648.7620	-0.0006	0.020		
225:	53	2	51	52	2	50	285735.4810	-0.0127	0.020		
226:	53	5	49	52	5	48	285812.2790	0.0037	0.020		
227:	53	5	48	52	5	47	286369.6630	0.0142	0.020		
228:	55	1	54	54	2	53	286828.9580	-0.0141	0.020		
229:	54	6	48	54	5	49	287453.3400	0.0031	0.035		
230:	54	3	52	53	3	51	288326.3630	0.0034	0.020		
231:	53	4	49	52	4	48	288664.2760	-0.0142	0.020		
232:	56	0	56	55	1	55	289077.0520	0.0016	0.020		
233:	55	2	54	54	2	53	289118.7980	-0.0019	0.020		
234:	56	1	56	55	1	55	289140.7740	0.0060	0.020		
235:	56	0	56	55	0	55	289151.4520	0.0134	0.020		

236:	56	1	56	55	0	55	289215.1420	-0.0140	0.020		
237:	55	1	54	54	1	53	289435.2140	0.0185	0.020		
238:	51	6	45	51	5	46	289622.0280	-0.0367	0.035		
239:	53	3	50	52	3	49	289862.7510	-0.0057	0.020		
240:	64	6	59	64	5	60	290042.1490	-0.0119	0.035		
241:	63	6	58	63	5	59	290045.2380	0.0110	0.035		
242:	65	6	60	65	5	61	290081.6000	-0.0099	0.035		
243:	62	6	57	62	5	58	290086.2910	-0.0179	0.035		
244:	66	6	61	66	5	62	290168.1530	-0.0137	0.035		
245:	19	4	15	18	3	16	290192.5870	-0.0210	0.025		
246:	57	6	52	57	5	53	290714.0370	-0.0516	0.035		
247:	54	4	51	53	4	50	290724.3870	-0.0089	0.020		
248:	49	6	43	49	5	44	290738.8040	0.0014	0.035		
249:	69	6	64	69	5	65	290757.2180	-0.0217	0.035		
250:	54	2	52	53	2	51	290790.1350	0.0019	0.020		
251:	54	8	47	53	8	46	290799.5630	0.0450	0.020	-0.0149	0.50
252:	54	8	46	53	8	45	290799.5630	-0.0749	0.020	-0.0149	0.50
253:	54	7	48	53	7	47	290833.2870	0.0005	0.020		
254:	54	7	47	53	7	46	290836.3740	-0.0064	0.020		
255:	54	9	46	53	9	45	290857.9900	0.0002	0.020	-0.0015	0.50
256:	54	9	45	53	9	44	290857.9900	-0.0032	0.020	-0.0015	0.50
257:	56	6	51	56	5	52	290896.9590	-0.0276	0.035		
258:	54	10	45	53	10	44	290981.1050	-0.0125	0.020	-0.0126	0.50
259:	54	10	44	53	10	43	290981.1050	-0.0126	0.020	-0.0126	0.50
260:	54	6	49	53	6	48	290996.4600	0.0025	0.020		
261:	54	6	48	53	6	47	291052.6450	0.0109	0.020		
262:	70	6	65	70	5	66	291079.1160	0.0577	0.035		
263:	55	6	50	55	5	51	291090.8950	-0.0130	0.035		
264:	54	11	43	53	11	42	291153.1350	-0.0314	0.020	-0.0315	0.25
265:	54	11	43	53	11	42	291153.1350	-0.0314	0.020	-0.0315	0.25
266:	54	11	44	53	11	43	291153.1350	-0.0314	0.020	-0.0315	0.25
267:	54	11	44	53	11	43	291153.1350	-0.0314	0.020	-0.0315	0.25
268:	54	5	50	53	5	49	291203.6360	0.0165	0.020	0.0166	0.50
269:	54	5	50	53	5	49	291203.6360	0.0165	0.020	0.0166	0.50
270:	48	6	42	48	5	43	291214.6620	0.0029	0.035	0.0029	0.50
271:	48	6	42	48	5	43	291214.6620	0.0029	0.035	0.0029	0.50
272:	54	13	42	53	13	41	291609.6710	-0.0006	0.020	-0.0007	0.50
273:	54	13	41	53	13	40	291609.6710	-0.0006	0.020	-0.0007	0.50
274:	62	1	61	62	0	62	291627.1230	0.0081	0.020	0.0082	0.50
275:	62	1	61	62	0	62	291627.1230	0.0081	0.020	0.0082	0.50
276:	47	6	41	47	5	42	291641.8370	-0.0471	0.035	-0.0472	0.50
277:	47	6	41	47	5	42	291641.8370	-0.0471	0.035	-0.0472	0.50
278:	52	6	47	52	5	48	291709.8310	-0.0297	0.035	-0.0297	0.50
279:	52	6	47	52	5	48	291709.8310	-0.0297	0.035	-0.0297	0.50
280:	55	2	54	54	1	53	291725.0130	-0.0102	0.020		
281:	54	5	49	53	5	48	291849.1340	0.0034	0.020		
282:	54	14	40	53	14	39	291883.9270	-0.0121	0.020	-0.0121	0.50
283:	54	14	41	53	14	40	291883.9270	-0.0121	0.020	-0.0121	0.50
284:	51	6	46	51	5	47	291920.0940	-0.0365	0.035		
285:	62	2	61	62	1	62	292505.3230	-0.0109	0.020		
286:	54	16	39	53	16	38	292509.1930	-0.0041	0.020	-0.0041	0.50
287:	54	16	38	53	16	37	292509.1930	-0.0041	0.020	-0.0041	0.50
288:	48	6	43	48	5	44	292534.0620	-0.0017	0.035		
289:	56	2	55	55	2	54	294227.4930	0.0177	0.020		
290:	36	6	31	36	5	32	294231.9120	0.0075	0.035		
291:	57	1	57	56	1	56	294237.1550	0.0080	0.020		
292:	35	6	29	35	5	30	294240.2840	0.0016	0.035		
293:	57	0	57	56	0	56	294246.2840	-0.0152	0.020		
294:	8	6	3	8	5	4	294265.3760	-0.0572	0.035	-0.0572	0.50
295:	8	6	2	8	5	3	294265.3760	-0.0572	0.035	-0.0572	0.50
296:	9	6	4	9	5	5	294285.1710	-0.0284	0.035	-0.0284	0.50

297:	9	6	3	9	5	4	294285.1710	-0.0283	0.035	-0.0284	0.50
298:	57	1	57	56	0	56	294300.8450	-0.0195	0.020		
299:	35	6	30	35	5	31	294306.4410	0.0302	0.035	0.0044	0.33
300:	10	6	4	10	5	5	294306.4410	-0.0084	0.035	0.0044	0.33
301:	10	6	5	10	5	6	294306.4410	-0.0086	0.035	0.0044	0.33
302:	34	6	28	34	5	29	294321.3160	0.0069	0.035		
303:	11	6	6	11	5	7	294328.9650	0.0051	0.035	0.0055	0.50
304:	11	6	5	11	5	6	294328.9650	0.0058	0.035	0.0055	0.50
305:	31	6	25	31	5	26	294492.0980	0.0221	0.035		
306:	18	6	13	18	5	14	294498.3530	-0.0298	0.035		
307:	56	1	55	55	1	54	294507.4410	-0.0144	0.020		
308:	31	6	26	31	5	27	294512.4480	-0.0310	0.035		
309:	19	6	14	19	5	15	294520.2490	-0.0377	0.035		
310:	30	6	24	30	5	25	294528.5440	0.0377	0.035		
311:	30	6	25	30	5	26	294543.3420	0.0076	0.035		
312:	29	6	23	29	5	24	294556.3060	0.0200	0.035		
313:	29	6	24	29	5	25	294566.9520	0.0114	0.035		
314:	22	6	16	22	5	17	294573.1780	0.0261	0.035		
315:	22	6	17	22	5	18	294573.8830	0.0223	0.035		
316:	28	6	22	28	5	23	294576.2740	0.0086	0.035		
317:	28	6	23	28	5	24	294583.8380	0.0093	0.035		
318:	23	6	17	23	5	18	294585.0870	0.0228	0.035		
319:	23	6	18	23	5	19	294586.1840	0.0216	0.035		
320:	27	6	21	27	5	22	294589.2560	0.0212	0.035		
321:	24	6	18	24	5	19	294593.2440	0.0251	0.035		
322:	26	6	20	26	5	21	294595.9860	0.0548	0.035		
323:	25	6	19	25	5	20	294597.0680	0.0242	0.035		
324:	26	6	21	26	5	22	294599.5810	-0.0120	0.035		
325:	59	0	59	58	1	58	304386.3670	-0.0051	0.020		
326:	59	1	59	58	1	58	304426.3520	-0.0132	0.020		
327:	59	0	59	58	0	58	304433.0850	-0.0056	0.020		
328:	58	2	57	57	2	56	304436.8420	0.0026	0.020		
329:	59	1	59	58	0	58	304473.0720	-0.0116	0.020		
330:	58	1	57	57	1	56	304655.0790	-0.0132	0.020		
331:	56	3	53	55	3	52	305872.4280	0.0124	0.020		
332:	57	2	55	56	2	54	305898.0230	-0.0111	0.020		
333:	58	2	57	57	1	56	306199.3110	-0.0021	0.020		
334:	57	9	49	56	9	48	306961.1750	-0.0053	0.020		
335:	57	7	51	56	7	50	306976.9660	-0.0042	0.020		
336:	57	7	50	56	7	49	306983.0120	0.0070	0.020		
337:	57	10	48	56	10	47	307079.1790	-0.0009	0.020		
338:	57	6	52	56	6	51	307176.8540	0.0146	0.020		
339:	57	11	46	56	11	45	307251.9600	-0.0110	0.020	-0.0110	0.50
340:	57	11	47	56	11	46	307251.9600	-0.0110	0.020	-0.0110	0.50
341:	57	6	51	56	6	50	307274.3270	0.0029	0.020		
342:	57	5	53	56	5	52	307359.7310	-0.0064	0.020		
343:	60	1	60	59	1	59	309519.1810	-0.0119	0.020		
344:	60	0	60	59	0	59	309524.9420	-0.0133	0.020		
345:	59	2	58	58	2	57	309537.8100	0.0063	0.020		
346:	62	5	57	61	5	56	335992.4420	0.0212	0.020		
347:	63	2	61	62	2	60	336002.9860	-0.0158	0.020		
348:	62	3	59	61	3	58	337278.3640	-0.0041	0.020		
349:	8	6	3	7	5	2	337323.4370	0.0277	0.035	0.0278	0.50
350:	8	6	2	7	5	3	337323.4370	0.0277	0.035	0.0278	0.50
351:	63	4	60	62	4	59	338226.2700	0.0282	0.020		
352:	18	5	14	17	4	13	338239.0680	0.0028	0.035		
353:	18	5	13	17	4	14	338244.5360	-0.0029	0.035		
354:	63	8	56	62	8	55	339129.8810	-0.0117	0.020		
355:	63	8	55	62	8	54	339130.9910	0.0072	0.020		
356:	63	9	55	62	9	54	339139.0060	0.0437	0.020	0.0222	0.50
357:	63	9	54	62	9	53	339139.0060	0.0005	0.020	0.0222	0.50

358:	28	4	24	27	3	25	339151.4180	0.0158	0.035		
359:	63	10	53	62	10	52	339241.0820	-0.0316	0.020	-0.0310	0.50
360:	63	10	54	62	10	53	339241.0820	-0.0303	0.020	-0.0310	0.50
361:	63	7	57	62	7	56	339253.8710	-0.0010	0.020		
362:	63	7	56	62	7	55	339274.3080	0.0100	0.020		
363:	29	4	26	28	3	25	339387.9970	0.0145	0.035		
364:	63	11	53	62	11	52	339411.3430	-0.0175	0.020	-0.0175	0.50
365:	63	11	52	62	11	51	339411.3430	-0.0175	0.020	-0.0175	0.50
366:	65	1	64	64	2	63	339498.1440	0.0209	0.025		
367:	63	6	58	62	6	57	339518.7660	-0.0112	0.020		
368:	63	5	59	62	5	58	339559.8440	-0.0151	0.025		
369:	68	7	61	68	6	62	339612.3900	-0.0400	0.035		
370:	63	12	52	62	12	51	339634.8520	-0.0244	0.020	-0.0244	0.50
371:	63	12	51	62	12	50	339634.8520	-0.0244	0.020	-0.0244	0.50
372:	63	6	57	62	6	56	339782.5980	0.0218	0.020		
373:	61	3	59	60	2	58	339816.6980	0.0152	0.035		
374:	64	3	62	63	3	61	339873.2270	-0.0018	0.025		
375:	63	13	50	62	13	49	339902.2850	-0.0229	0.025	-0.0230	0.50
376:	63	13	51	62	13	50	339902.2850	-0.0229	0.025	-0.0230	0.50
377:	66	0	66	65	1	65	340037.1970	-0.0152	0.025		
378:	66	1	66	65	1	65	340050.6510	0.0072	0.025		
379:	66	0	66	65	0	65	340052.9250	0.0127	0.025		
380:	66	1	66	65	0	65	340066.3530	0.0092	0.025		
381:	65	2	64	64	2	63	340098.4370	0.0108	0.025		
382:	65	1	64	64	1	63	340186.4010	0.0220	0.025		
383:	64	3	61	63	3	60	347565.7500	-0.0209	0.025		
384:	44	7	37	44	6	38	347568.5270	-0.0278	0.035		
385:	26	7	19	26	6	20	347577.5150	0.0584	0.035	0.0298	0.50
386:	26	7	20	26	6	21	347577.5150	0.0011	0.035	0.0298	0.50
387:	44	7	38	44	6	39	347595.8010	-0.0039	0.035		
388:	27	7	20	27	6	21	347613.6330	0.0680	0.035		
389:	43	7	36	43	6	37	347628.5700	0.0167	0.035		
390:	28	7	21	28	6	22	347647.7380	0.0853	0.035		
391:	43	7	37	43	6	38	347649.4420	-0.0144	0.035		
392:	42	7	35	42	6	36	347678.3170	-0.0232	0.035		
393:	42	7	36	42	6	37	347694.2640	-0.0021	0.035		
394:	30	7	24	30	6	25	347708.4780	-0.1211	0.035	0.0344	0.50
395:	30	7	23	30	6	24	347708.4780	0.1900	0.035	0.0344	0.50
396:	41	7	34	41	6	35	347718.6410	-0.0018	0.035		
397:	41	7	35	41	6	36	347730.6830	-0.0075	0.035		
398:	40	7	33	40	6	34	347750.1530	0.0085	0.035		
399:	39	7	32	39	6	33	347773.4890	-0.0011	0.035		
400:	33	7	26	33	6	27	347774.4960	0.0341	0.035		
401:	33	7	27	33	6	28	347775.4590	0.0414	0.035		
402:	39	7	33	39	6	34	347780.2450	0.0147	0.035		
403:	34	7	27	34	6	28	347788.2520	0.0310	0.035		
404:	38	7	32	38	6	33	347794.2790	0.0076	0.035		
405:	35	7	28	35	6	29	347797.0790	0.0033	0.035		
406:	37	7	30	37	6	31	347798.1260	0.0011	0.035		
407:	35	7	29	35	6	30	347799.0120	0.0307	0.035		
408:	36	7	29	36	6	30	347800.5530	0.0084	0.035		
409:	37	7	31	37	6	32	347801.7890	0.0148	0.035		
410:	36	7	30	36	6	31	347803.1830	-0.0111	0.035		
411:	64	4	60	63	4	59	349724.1330	-0.0381	0.025		
412:	67	1	66	66	2	65	349814.0010	0.0075	0.025		
413:	65	9	57	64	9	56	349855.8610	0.0377	0.025		
414:	65	8	58	64	8	57	349861.1960	0.0492	0.025		
415:	65	8	57	64	8	56	349862.8520	0.0091	0.025		
416:	65	10	56	64	10	55	349950.9330	-0.0102	0.025	-0.0114	0.50
417:	65	10	55	64	10	54	349950.9330	-0.0125	0.025	-0.0114	0.50
418:	65	7	58	64	7	57	350038.5430	-0.0360	0.025		

419:	66	3	64	65	3	63	350111.7590	0.0096	0.025	
420:	65	11	54	64	11	53	350119.0490	-0.0476	0.025	
421:	68	0	68	67	1	67	350207.9480	-0.0122	0.025	
422:	68	1	68	67	1	67	350217.8040	0.0135	0.025	
423:	68	0	68	67	0	67	350219.4690	0.0181	0.025	
424:	68	1	68	67	0	67	350229.2960	0.0149	0.025	
425:	65	5	61	64	5	60	350249.6690	-0.0165	0.025	
426:	67	2	66	66	2	65	350270.0600	0.0168	0.025	
427:	65	6	60	64	6	59	350289.1420	0.0074	0.025	
428:	67	1	66	66	1	65	350337.3450	0.0090	0.025	
429:	65	12	53	64	12	52	350343.9830	-0.0183	0.025	-0.0183 0.50
430:	65	12	54	64	12	53	350343.9830	-0.0183	0.025	-0.0183 0.50
431:	30	4	26	29	3	27	350365.0840	-0.0223	0.035	
432:	68	3	66	67	3	65	360331.1940	-0.0003	0.025	
433:	70	1	70	69	1	69	360379.7560	0.0017	0.025	
434:	70	0	70	69	0	69	360380.9850	0.0158	0.025	
435:	69	2	68	68	2	67	360434.7840	-0.0105	0.025	
436:	69	1	68	68	1	67	360486.1350	-0.0058	0.025	
437:	66	4	62	65	4	61	360626.8930	0.0240	0.025	
438:	23	5	19	22	4	18	365080.3490	0.0257	0.035	
439:	23	5	18	22	4	19	365122.1860	0.0149	0.035	
440:	70	2	68	69	3	67	365411.1430	0.0245	0.035	
441:	69	3	67	68	3	66	365434.3430	0.0050	0.025	
442:	71	1	71	70	1	70	365458.7420	-0.0137	0.025	
443:	71	0	71	70	0	70	365459.8110	0.0161	0.025	
444:	71	1	71	70	0	70	365465.9560	0.0052	0.025	
445:	70	2	69	69	2	68	365514.6960	0.0071	0.025	
446:	70	1	69	69	1	68	365559.4970	-0.0033	0.025	
447:	68	9	60	67	9	59	365922.1170	0.0552	0.025	
448:	68	8	61	67	8	60	365951.4350	0.0313	0.025	
449:	68	8	60	67	8	59	365954.6110	0.0147	0.025	
450:	68	10	59	67	10	58	366004.8900	-0.0245	0.025	
451:	67	4	63	66	4	62	366047.2980	-0.0157	0.025	
452:	69	2	67	68	2	66	366131.9040	-0.0091	0.025	
453:	68	7	62	67	7	61	366136.3850	0.0149	0.025	
454:	68	7	61	67	7	60	366187.2230	0.0391	0.025	
455:	68	12	56	67	12	55	366394.7360	-0.0497	0.025	
456:	68	6	63	67	6	62	366429.3220	0.0149	0.025	
457:	68	6	62	67	6	61	366976.5650	0.0247	0.025	
458:	68	3	65	67	3	64	367898.1690	-0.0330	0.025	
459:	69	4	66	68	4	65	369504.4970	-0.0154	0.025	
460:	70	3	68	69	3	67	370533.3710	-0.0143	0.025	
461:	72	1	72	71	1	71	370536.3720	-0.0447	0.025	
462:	72	0	72	71	0	71	370537.3060	0.0005	0.025	
463:	71	2	70	70	2	69	370592.9810	0.0139	0.025	
464:	71	1	70	70	1	69	370632.0650	0.0107	0.025	
465:	70	2	68	69	2	67	371161.0200	0.0023	0.025	
466:	68	4	64	67	4	63	371446.2710	-0.0085	0.025	
467:	70	4	67	69	4	66	374687.7720	-0.0214	0.025	
468:	73	1	73	72	1	72	375612.6800	-0.0419	0.025	
469:	73	0	73	72	0	72	375613.4860	0.0040	0.025	
470:	72	1	71	71	1	70	375703.7520	0.0235	0.025	
471:	69	4	65	68	4	64	376823.2300	0.0098	0.025	
472:	70	3	67	69	3	66	377963.2040	-0.0028	0.025	
473:	71	4	68	70	4	67	379862.9260	0.0168	0.025	
474:	73	1	72	72	2	71	380546.5230	-0.0040	0.025	
475:	16	6	11	15	5	10	380584.2840	0.0406	0.035	0.0326 0.50
476:	16	6	10	15	5	11	380584.2840	0.0245	0.035	0.0326 0.50
477:	70	5	65	69	5	64	380597.1620	-0.0199	0.025	
478:	74	1	74	73	1	73	380687.6390	-0.0166	0.025	
479:	74	0	74	73	0	73	380688.3180	0.0123	0.025	

480:	72	3	70	71	3	69	380719.9890	-0.0138	0.025		
481:	73	2	72	72	2	71	380744.7780	0.0186	0.025		
482:	73	1	72	72	1	71	380774.4680	0.0132	0.025		
483:	72	2	70	71	2	69	381225.4800	0.0002	0.025		
484:	70	4	66	69	4	65	382177.6740	0.0067	0.025		
485:	72	4	69	71	4	68	385030.0270	-0.0015	0.025		
486:	73	3	71	72	3	70	385807.9560	0.0040	0.025		
487:	74	2	73	73	2	72	385818.3160	0.0110	0.025		
488:	74	1	73	73	1	72	385844.1720	0.0009	0.025		
489:	73	2	71	72	2	70	386260.5570	0.0310	0.025		
490:	71	4	67	70	4	66	387509.1870	-0.0367	0.025		
491:	72	3	69	71	3	68	387977.6970	0.0146	0.025		
492:	73	4	70	72	4	69	390189.3530	0.0172	0.025		
493:	76	0	76	75	0	75	390833.5960	-0.2257	0.025	0.0120	0.50
494:	76	1	76	75	1	75	390833.5960	0.2497	0.025	0.0120	0.50
495:	74	3	72	73	3	71	390892.5680	0.0058	0.025		
496:	74	2	72	73	2	71	391297.2070	0.0045	0.025		
497:	72	4	68	71	4	67	392817.5600	-0.0015	0.025		
498:	73	3	70	72	3	69	392970.2920	-0.0021	0.025		
499:	74	4	71	73	4	70	395341.0150	-0.0134	0.025		
500:	76	2	75	75	2	74	395960.7450	-0.0007	0.025		
501:	75	3	73	74	3	72	395973.9870	-0.0079	0.025		
502:	76	1	75	75	1	74	395980.3590	0.0105	0.025		
503:	75	2	73	74	2	72	396335.2890	-0.0190	0.025		
504:	73	4	69	72	4	68	398102.4480	0.0255	0.025		
505:	75	4	72	74	4	71	400485.3000	-0.0159	0.025		
506:	78	1	78	77	1	77	400973.5520	0.1894	0.025	0.0155	0.50
507:	78	0	78	77	0	77	400973.5520	-0.1584	0.025	0.0155	0.50
508:	44	8	36	44	7	37	401009.7930	0.0654	0.035		
509:	44	8	37	44	7	38	401010.6430	0.0587	0.035		
510:	53	8	45	53	7	46	401015.5320	0.0196	0.035		
511:	53	8	46	53	7	47	401025.9990	-0.0213	0.035		
512:	77	2	76	76	2	75	401029.6380	-0.0139	0.025		
513:	45	8	37	45	7	38	401034.9290	-0.0352	0.035		
514:	45	8	38	45	7	39	401036.0990	-0.0273	0.035		
515:	52	8	44	52	7	45	401043.5170	0.0025	0.035		
516:	77	1	76	76	1	75	401046.7170	0.0087	0.025		
517:	46	8	38	46	7	39	401055.0500	0.0383	0.035		
518:	51	8	43	51	7	44	401063.2940	0.0097	0.035		
519:	47	8	39	47	7	40	401069.4980	0.0182	0.035		
520:	47	8	40	47	7	41	401071.5490	-0.0236	0.035		
521:	50	8	42	50	7	43	401075.2690	-0.0390	0.035		
522:	48	8	40	48	7	41	401077.9320	-0.0335	0.035		
523:	49	8	41	49	7	42	401080.0500	-0.0023	0.035		
524:	49	8	42	49	7	43	401083.6960	-0.0268	0.035		
525:	76	2	74	75	2	73	401374.6590	0.0226	0.025		
526:	31	5	26	30	4	27	407827.1700	0.0374	0.040		
527:	76	3	73	75	3	72	407909.5550	-0.0271	0.025		
528:	75	5	70	74	5	69	408443.2220	-0.0212	0.025		
529:	76	5	72	75	5	71	408518.6280	-0.0064	0.025		
530:	75	4	71	74	4	70	408601.0490	-0.0117	0.025		
531:	76	9	68	75	9	67	408708.3890	-0.0476	0.025		
532:	76	9	67	75	9	66	408709.2940	-0.0031	0.025		
533:	76	10	67	75	10	66	408747.8750	-0.0313	0.025	-0.0506	0.50
534:	76	10	66	75	10	65	408747.8750	-0.0698	0.025	-0.0506	0.50
535:	76	8	69	75	8	68	408815.9150	0.0189	0.025		
536:	76	8	68	75	8	67	408830.6440	-0.0263	0.025		
537:	76	11	65	75	11	64	408892.5310	-0.0328	0.025		
538:	76	7	70	75	7	69	409100.0670	-0.0273	0.025		
539:	76	12	64	75	12	63	409116.1970	-0.0468	0.025		
540:	76	7	69	75	7	68	409284.1120	0.0356	0.025		

541:	76	6	71	75	6	70	409329.2110	0.0370	0.025		
542:	77	4	74	76	4	73	410752.5420	-0.0177	0.025		
543/	76	6	70	75	6	69	410800.2420	0.0869	0.025		
544:	80	0	80	79	1	79	411106.0580	-0.0010	0.025		
545:	80	0	80	79	0	79	411107.7010	-0.1315	0.025	-0.0043	0.50
546:	80	1	80	79	1	79	411107.7010	0.1229	0.025	-0.0043	0.50
547:	80	1	80	79	0	79	411109.3660	0.0144	0.025		
548:	79	2	78	78	2	77	411162.8160	-0.0277	0.025		
549:	79	1	78	78	1	77	411175.7810	0.0356	0.025		
550:	78	3	76	77	3	75	411200.6210	-0.0533	0.025		
551:	78	2	76	77	2	75	411456.1330	-0.0039	0.025		
552:	12	7	5	11	6	6	411649.1170	0.0417	0.035	0.0417	0.50
553:	12	7	6	11	6	5	411649.1170	0.0417	0.035	0.0417	0.50
554:	36	6	31	35	5	30	488158.5080	-0.0595	0.040		
555:	19	8	11	18	7	12	501988.5230	0.0540	0.040	0.0540	0.50
556:	19	8	12	18	7	11	501988.5230	0.0540	0.040	0.0540	0.50
557:	98	1	98	97	1	97	502033.7830	-0.0223	0.040		
558:	97	2	96	96	2	95	502075.3350	-0.0667	0.040		
559:	97	1	96	96	1	95	502076.4600	0.0376	0.040		
560:	96	3	94	95	3	93	502128.9290	0.0473	0.040		
561:	96	2	94	95	2	93	502156.8360	0.0268	0.040		
562:	95	4	92	94	4	91	502167.1060	0.0081	0.040		
563:	13	10	3	13	9	4	502419.5140	0.0654	0.040	0.0655	0.50
564:	13	10	4	13	9	5	502419.5140	0.0654	0.040	0.0655	0.50
565:	14	10	4	14	9	5	502476.6540	0.0864	0.040	0.0865	0.50
566:	14	10	5	14	9	6	502476.6540	0.0864	0.040	0.0865	0.50
567:	15	10	5	15	9	6	502537.5420	0.0788	0.040	0.0788	0.50
568:	15	10	6	15	9	7	502537.5420	0.0788	0.040	0.0788	0.50
569:	95	3	92	94	3	91	502567.4340	-0.0029	0.040		
570:	30	10	20	30	9	21	503852.5120	0.0781	0.040	0.0781	0.50
571:	30	10	21	30	9	22	503852.5120	0.0781	0.040	0.0781	0.50
572:	51	4	47	50	3	48	503861.7970	-0.0409	0.040		
573:	29	7	23	28	6	22	503871.0110	0.0801	0.040	0.0090	0.50
574:	29	7	22	28	6	23	503871.0110	-0.0621	0.040	0.0090	0.50
575:	36	10	26	36	9	27	504544.1920	0.1152	0.040	0.1153	0.50
576:	36	10	27	36	9	28	504544.1920	0.1152	0.040	0.1153	0.50
577/	37	10	27	37	9	28	504665.6420	0.1306	0.040	0.1306	0.50
578:	37	10	28	37	9	29	504665.6420	0.1306	0.040	0.1306	0.50
579:	77	10	67	77	9	68	508790.8730	-0.0571	0.040		
580/	77	10	68	77	9	69	508795.8890	-0.2007	0.040		
581/	78	10	68	78	9	69	508815.6560	-0.1260	0.040		
582/	79	10	69	79	9	70	508833.0120	-0.2675	0.040		
583:	22	8	15	21	7	14	518322.0130	0.0153	0.040	0.0154	0.50
584:	22	8	14	21	7	15	518322.0130	0.0153	0.040	0.0154	0.50
585:	32	7	26	31	6	25	520115.8800	0.2275	0.040	-0.0105	0.50
586:	32	7	25	31	6	26	520115.8800	-0.2486	0.040	-0.0105	0.50
587:	13	9	4	12	8	5	521213.2090	0.0857	0.040	0.0858	0.50
588:	13	9	5	12	8	4	521213.2090	0.0857	0.040	0.0858	0.50
589:	23	8	16	22	7	15	523769.2000	0.0954	0.040	0.0954	0.50
590:	23	8	15	22	7	16	523769.2000	0.0953	0.040	0.0954	0.50
591:	33	7	27	32	6	26	525524.1090	0.3678	0.040	0.0211	0.50
592:	33	7	26	32	6	27	525524.1090	-0.3256	0.040	0.0211	0.50
593:	14	9	5	13	8	6	526653.4160	0.0320	0.040	0.0320	0.50
594:	14	9	6	13	8	5	526653.4160	0.0320	0.040	0.0320	0.50
595:	24	8	17	23	7	16	529217.2410	0.0499	0.040	0.0499	0.50
596:	24	8	16	23	7	17	529217.2410	0.0498	0.040	0.0499	0.50
! Margules+20											
597:	29	0	29	28	0	28	151461.2210	0.0019	0.030		
598:	30	0	30	29	0	29	156555.4830	-0.0207	0.030		
599:	31	0	31	30	0	30	161650.4530	0.0226	0.030		
600:	32	0	32	31	0	31	166746.2200	0.0113	0.030		

601:	33	0	33	32	0	32	171842.9450	-0.0038	0.030
602:	34	0	34	33	0	33	176940.7000	0.0159	0.030
603:	35	0	35	34	0	34	182039.3710	-0.0183	0.030
604:	36	0	36	35	0	35	187138.9860	-0.0120	0.030
605:	37	0	37	36	0	36	192239.4340	0.0193	0.030
606:	38	0	38	37	0	37	197340.5080	-0.0174	0.030
607:	39	0	39	38	0	38	202442.2230	0.0166	0.030
608:	40	0	40	39	0	39	207544.3550	0.0257	0.030
609:	41	0	41	40	0	40	212646.7290	-0.0368	0.030
610:	42	0	42	41	0	41	217749.3730	-0.0179	0.030
611:	44	0	44	43	0	43	227954.7290	-0.0051	0.030
612:	45	0	45	44	0	44	233057.2390	0.0062	0.030
613:	46	0	46	45	0	45	238159.4870	0.0049	0.030
614:	47	0	47	46	0	46	243261.3890	-0.0017	0.030
615:	48	0	48	47	0	47	248362.8640	-0.0110	0.030
616:	49	0	49	48	0	48	253463.8590	0.0013	0.030
617:	50	0	50	49	0	49	258564.2790	0.0108	0.030
618:	51	0	51	50	0	50	263664.0440	0.0024	0.030
619:	52	0	52	51	0	51	268763.1110	-0.0076	0.030
620:	53	0	53	52	0	52	273861.4490	0.0040	0.030
621:	54	0	54	53	0	53	278958.9640	-0.0064	0.030
622:	56	0	56	55	0	55	289151.4340	-0.0045	0.030
623:	57	0	57	56	0	56	294246.3250	0.0258	0.030
624:	58	0	58	57	0	57	299340.1820	-0.0126	0.030
625:	59	0	59	58	0	58	304433.0940	0.0033	0.030
626:	60	0	60	59	0	59	309524.9120	-0.0433	0.030
627:	61	0	61	60	0	60	314615.7730	0.0142	0.030
628:	62	0	62	61	0	61	319705.4590	-0.0134	0.030
629:	63	0	63	62	0	62	324794.0500	-0.0196	0.030
630:	64	0	64	63	0	63	329881.5260	0.0011	0.030
631:	28	1	27	27	1	26	151820.1880	-0.0005	0.030
632:	29	1	28	28	1	27	157053.2500	-0.0216	0.030
633:	29	1	29	28	1	28	150997.7920	-0.0015	0.030
634:	30	1	29	29	1	28	162266.5110	0.0013	0.030
635:	30	1	30	29	1	29	156141.5590	0.0119	0.030
636:	31	1	30	30	1	29	167460.1620	-0.0104	0.030
637:	31	1	31	30	1	30	161282.0900	0.0115	0.030
638:	32	1	31	31	1	30	172634.8100	-0.0083	0.030
639:	32	1	32	31	1	31	166419.5800	0.0020	0.030
640:	33	1	32	32	1	31	177791.2850	-0.0101	0.030
641:	33	1	33	32	1	32	171554.2270	-0.0025	0.030
642:	34	1	33	33	1	32	182930.7150	-0.0116	0.030
643:	34	1	34	33	1	33	176686.1890	-0.0201	0.030
644:	35	1	34	34	1	33	188054.4690	-0.0124	0.030
645:	35	1	35	34	1	34	181815.6770	-0.0065	0.030
646:	36	1	35	35	1	34	193164.1430	0.0150	0.030
647:	36	1	36	35	1	35	186942.8190	0.0098	0.030
648:	37	1	36	36	1	35	198261.3710	-0.0067	0.030
649:	37	1	37	36	1	36	192067.7500	0.0184	0.030
650:	38	1	37	37	1	36	203347.9980	-0.0233	0.030
651:	38	1	38	37	1	37	197190.5860	0.0008	0.030
652:	39	1	38	38	1	37	208425.8700	0.0073	0.030
653:	39	1	39	38	1	38	202311.4690	-0.0238	0.030
654:	40	1	39	39	1	38	213496.6910	0.0342	0.030
655:	40	1	40	39	1	39	207430.5980	0.0315	0.030
656:	41	1	40	40	1	39	218562.0230	-0.0329	0.030
657:	41	1	41	40	1	40	212547.9030	-0.0035	0.030
658:	42	1	42	41	1	41	217663.6280	0.0248	0.030
659:	43	1	42	42	1	41	228682.5060	-0.0156	0.030
660:	44	1	43	43	1	42	233740.0450	-0.0147	0.030
661:	44	1	44	43	1	43	227890.3810	0.0052	0.030

662:	45	1	44	44	1	43	238797.1130	-0.0123	0.030
663:	45	1	45	44	1	44	233001.5890	0.0057	0.030
664:	46	1	45	45	1	44	243854.4660	-0.0055	0.030
665:	46	1	46	45	1	45	238111.4200	0.0085	0.030
666:	47	1	46	46	1	45	248912.6660	-0.0080	0.030
667:	47	1	47	46	1	46	243219.9110	0.0053	0.030
668:	48	1	47	47	1	46	253972.1370	-0.0120	0.030
669:	48	1	48	47	1	47	248327.1100	0.0059	0.030
670:	49	1	48	48	1	47	259033.1560	-0.0178	0.030
671:	49	1	49	48	1	48	253433.0300	-0.0083	0.030
672:	50	1	49	49	1	48	264095.8980	-0.0108	0.030
673:	50	1	50	49	1	49	258537.7330	-0.0014	0.030
674:	51	1	50	50	1	49	269160.4140	-0.0050	0.030
675:	51	1	51	50	1	50	263641.1980	-0.0151	0.030
676:	52	1	51	51	1	50	274226.6950	0.0021	0.030
677:	52	1	52	51	1	51	268743.4860	-0.0043	0.030
678:	53	1	52	52	1	51	279294.6490	-0.0116	0.030
679:	53	1	53	52	1	52	273844.5820	0.0040	0.030
680:	54	1	54	53	1	53	278944.4810	-0.0030	0.030
681:	55	1	54	54	1	53	289435.1960	0.0005	0.030
682:	56	1	55	55	1	54	294507.4700	0.0145	0.030
683:	56	1	56	55	1	55	289140.7590	-0.0089	0.030
684:	57	1	56	56	1	55	299580.8130	-0.0013	0.030
685:	57	1	57	56	1	56	294237.1770	0.0300	0.030
686:	58	1	57	57	1	56	304655.0920	-0.0002	0.030
687:	58	1	58	57	1	57	299332.3420	-0.0057	0.030
688:	59	1	58	58	1	57	309730.1200	0.0108	0.030
689:	59	1	59	58	1	58	304426.3880	0.0228	0.030
690:	60	1	59	59	1	58	314805.6770	-0.0117	0.030
691:	60	1	60	59	1	59	309519.1590	-0.0339	0.030
692:	61	1	60	60	1	59	319881.6210	-0.0400	0.030
693:	61	1	61	60	1	60	314610.8230	0.0002	0.030
694:	62	1	61	61	1	60	324957.8420	-0.0220	0.030
695:	62	1	62	61	1	61	319701.2450	-0.0005	0.030
696:	63	1	63	62	1	62	324790.4290	-0.0217	0.030
697:	64	1	64	63	1	63	329878.4350	0.0078	0.030
698:	28	2	26	27	2	25	153379.2810	0.0153	0.030
699:	29	2	27	28	2	26	158885.0420	-0.0027	0.030
700:	29	2	28	28	2	27	154680.7900	0.0272	0.030
701:	30	2	28	29	2	27	164378.3200	0.0024	0.030
702:	30	2	29	29	2	28	159930.1960	-0.0217	0.030
703:	31	2	29	30	2	28	169858.0570	-0.0170	0.030
704:	31	2	30	30	2	29	165172.3600	-0.0077	0.030
705:	32	2	30	31	2	29	175323.3790	-0.0167	0.030
706:	32	2	31	31	2	30	170407.1970	-0.0211	0.030
707:	33	2	31	32	2	30	180773.4340	0.0012	0.030
708:	33	2	32	32	2	31	175634.8170	0.0158	0.030
709:	34	2	32	33	2	31	186207.3750	-0.0099	0.030
710:	34	2	33	33	2	32	180855.1740	-0.0013	0.030
711:	35	2	33	34	2	32	191624.4990	0.0108	0.030
712:	35	2	34	34	2	33	186068.4310	0.0060	0.030
713:	36	2	34	35	2	33	197024.0050	-0.0002	0.030
714:	36	2	35	35	2	34	191274.6360	-0.0230	0.030
715:	37	2	35	36	2	34	202405.2320	0.0088	0.030
716:	37	2	36	36	2	35	196474.0060	-0.0039	0.030
717:	38	2	36	37	2	35	207767.4660	0.0100	0.030
718:	38	2	37	37	2	36	201666.6240	-0.0075	0.030
719:	39	2	37	38	2	36	213110.0800	0.0270	0.030
720:	39	2	38	38	2	37	206852.6650	-0.0324	0.030
721:	40	2	38	39	2	37	218432.4340	0.0217	0.030
722:	40	2	39	39	2	38	212032.3840	-0.0147	0.030

723:	41	2	40	40	2	39	217205.9330	-0.0086	0.030
724:	42	2	40	41	2	39	229014.3590	-0.0133	0.030
725:	43	2	41	42	2	40	234273.2150	0.0130	0.030
726:	43	2	42	42	2	41	227535.4280	-0.0093	0.030
727:	44	2	42	43	2	41	239510.2960	-0.0093	0.030
728:	44	2	43	43	2	42	232691.8410	-0.0139	0.030
729:	45	2	43	44	2	42	244725.6550	-0.0154	0.030
730:	45	2	44	44	2	43	237843.0540	0.0153	0.030
731:	46	2	44	45	2	43	249919.4880	0.0054	0.030
732:	46	2	45	45	2	44	242989.2360	0.0047	0.030
733:	47	2	45	46	2	44	255092.1410	-0.0035	0.030
734:	47	2	46	46	2	45	248130.6620	-0.0136	0.030
735:	48	2	46	47	2	45	260244.2940	0.0022	0.030
736:	48	2	47	47	2	46	253267.6070	-0.0052	0.030
737:	49	2	47	48	2	46	265376.7900	-0.0064	0.030
738:	49	2	48	48	2	47	258400.2850	0.0081	0.030
739:	50	2	48	49	2	47	270490.7640	0.0015	0.030
740:	50	2	49	49	2	48	263528.8870	-0.0121	0.030
741:	51	2	49	50	2	48	275587.4970	-0.0105	0.030
742:	51	2	50	50	2	49	268653.6930	-0.0079	0.030
743:	52	2	50	51	2	49	280668.5210	-0.0138	0.030
744:	52	2	51	51	2	50	273774.8820	-0.0130	0.030
745:	53	2	51	52	2	50	285735.4910	-0.0027	0.030
746:	53	2	52	52	2	51	278892.6820	-0.0017	0.030
747:	54	2	52	53	2	51	290790.1170	-0.0160	0.030
748:	55	2	53	54	2	52	295834.2680	0.0181	0.030
749:	55	2	54	54	2	53	289118.8080	0.0080	0.030
750:	56	2	54	55	2	53	300869.6360	-0.0012	0.030
751:	56	2	55	55	2	54	294227.4770	0.0017	0.030
752:	57	2	55	56	2	54	305898.0460	0.0118	0.030
753:	57	2	56	56	2	55	299333.4360	-0.0044	0.030
754:	58	2	56	57	2	55	310921.0860	0.0040	0.030
755:	58	2	57	57	2	56	304436.8320	-0.0073	0.030
756:	59	2	57	58	2	56	315940.2990	0.0104	0.030
757:	59	2	58	58	2	57	309537.7980	-0.0056	0.030
758:	60	2	58	59	2	57	320957.0420	0.0398	0.030
759:	60	2	59	59	2	58	314636.4520	-0.0015	0.030
760:	61	2	59	60	2	58	325972.4220	0.0265	0.030
761:	61	2	60	60	2	59	319732.9230	0.0253	0.030
762:	62	2	61	61	2	60	324827.2280	-0.0060	0.030
763:	28	3	25	27	3	24	151708.3380	-0.0023	0.030
764:	28	3	26	27	3	25	150788.5230	-0.0159	0.030
765:	29	3	26	28	3	25	157235.1500	0.0199	0.030
766:	29	3	27	28	3	26	156160.7740	0.0119	0.030
767:	30	3	27	29	3	26	162773.3290	-0.0174	0.030
768:	30	3	28	29	3	27	161528.7460	-0.0016	0.030
769:	31	3	28	30	3	27	168322.4190	-0.0008	0.030
770:	31	3	29	30	3	28	166892.0800	-0.0050	0.030
771:	32	3	29	31	3	28	173881.5040	0.0183	0.030
772:	32	3	30	31	3	29	172250.3770	0.0011	0.030
773:	33	3	30	32	3	29	179449.4070	0.0244	0.030
774:	33	3	31	32	3	30	177603.2360	-0.0000	0.030
775:	34	3	31	33	3	30	185024.6710	0.0060	0.030
776:	34	3	32	33	3	31	182950.3110	0.0116	0.030
777:	35	3	32	34	3	31	190605.6390	0.0068	0.030
778:	35	3	33	34	3	32	188291.2250	0.0060	0.030
779:	36	3	33	35	3	32	196190.3650	-0.0071	0.030
780:	36	3	34	35	3	33	193625.6550	-0.0149	0.030
781:	37	3	34	36	3	33	201776.8100	-0.0067	0.030
782:	37	3	35	36	3	34	198953.3650	0.0146	0.030
783:	38	3	35	37	3	34	207362.8210	0.0174	0.030

784:	38	3	36	37	3	35	204273.9820	-0.0010	0.030
785:	39	3	36	38	3	35	212946.1660	0.0252	0.030
786:	39	3	37	38	3	36	209587.2920	-0.0250	0.030
787:	40	3	37	39	3	36	218524.6770	0.0104	0.030
788:	40	3	38	39	3	37	214893.1060	-0.0220	0.030
789:	42	3	39	41	3	38	229659.1030	0.0104	0.030
790:	42	3	40	41	3	39	225481.4290	0.0058	0.030
791:	43	3	40	42	3	39	235211.2310	-0.0037	0.030
792:	43	3	41	42	3	40	230763.6000	0.0005	0.030
793:	44	3	41	43	3	40	240751.0970	0.0039	0.030
794:	44	3	42	43	3	41	236037.6360	-0.0017	0.030
795:	45	3	42	44	3	41	246277.1950	-0.0079	0.030
796:	45	3	43	44	3	42	241303.4620	0.0056	0.030
797:	46	3	43	45	3	42	251788.2720	0.0073	0.030
798:	46	3	44	45	3	43	246561.0010	-0.0016	0.030
799:	47	3	44	46	3	43	257283.1400	0.0089	0.030
800:	47	3	45	46	3	44	251810.2460	-0.0063	0.030
801:	48	3	45	47	3	44	262760.7750	-0.0151	0.030
802:	48	3	46	47	3	45	257051.2020	-0.0074	0.030
803:	49	3	46	48	3	45	268220.3460	-0.0006	0.030
804:	49	3	47	48	3	46	262283.9060	0.0007	0.030
805:	50	3	47	49	3	46	273660.9940	-0.0095	0.030
806:	50	3	48	49	3	47	267508.3950	-0.0029	0.030
807:	51	3	48	50	3	47	279082.0440	-0.0013	0.030
808:	51	3	49	50	3	48	272724.7570	-0.0137	0.030
809:	52	3	50	51	3	49	277933.1310	-0.0004	0.030
810:	53	3	50	52	3	49	289862.7480	-0.0087	0.030
811:	54	3	51	53	3	50	295221.3050	-0.0019	0.030
812:	54	3	52	53	3	51	288326.3590	-0.0005	0.030
813:	55	3	52	54	3	51	300558.0000	0.0010	0.030
814:	55	3	53	54	3	52	293511.5540	0.0043	0.030
815:	56	3	53	55	3	52	305872.3910	-0.0245	0.030
816:	56	3	54	55	3	53	298689.3620	-0.0070	0.030
817:	57	3	54	56	3	53	311164.2270	0.0182	0.030
818:	57	3	55	56	3	54	303860.0340	0.0125	0.030
819:	58	3	55	57	3	54	316433.1250	0.0122	0.030
820:	58	3	56	57	3	55	309023.7350	0.0111	0.030
821:	59	3	56	58	3	55	321678.9900	0.0295	0.030
822:	59	3	57	58	3	56	314180.7310	0.0269	0.030
823:	60	3	57	59	3	56	326901.7230	0.0210	0.030
824:	60	3	58	59	3	57	319331.1610	-0.0375	0.030
825:	61	3	59	60	3	58	324475.4640	0.0137	0.030
826:	62	3	60	61	3	59	329613.7180	0.0116	0.030
827:	28	4	24	27	4	23	150948.9520	-0.0153	0.030
828:	28	4	25	27	4	24	150883.1780	0.0052	0.030
829:	29	4	25	28	4	24	156369.2320	0.0118	0.030
830:	30	4	26	29	4	25	161793.7550	-0.0299	0.030
831:	30	4	27	29	4	26	161688.5690	-0.0235	0.030
832:	31	4	27	30	4	26	167223.0920	0.0037	0.030
833:	31	4	28	30	4	27	167091.8200	-0.0010	0.030
834:	32	4	28	31	4	27	172657.5900	-0.0002	0.030
835:	32	4	29	31	4	28	172495.1170	-0.0005	0.030
836:	33	4	29	32	4	28	178097.7760	-0.0075	0.030
837:	33	4	30	32	4	29	177898.2330	-0.0101	0.030
838:	34	4	30	33	4	29	183544.1960	0.0068	0.030
839:	34	4	31	33	4	30	183300.9150	-0.0205	0.030
840:	35	4	31	34	4	30	188997.3430	-0.0085	0.030
841:	35	4	32	34	4	31	188702.9000	-0.0092	0.030
842:	36	4	32	35	4	31	194457.8200	-0.0107	0.030
843:	36	4	33	35	4	32	194103.8600	0.0031	0.030
844:	37	4	33	36	4	32	199926.1770	-0.0148	0.030

845:	37	4	34	36	4	33	199503.4690	0.0179	0.030
846:	38	4	34	37	4	33	205403.0100	0.0183	0.030
847:	38	4	35	37	4	34	204901.3440	-0.0020	0.030
848:	39	4	35	38	4	34	210888.7490	-0.0129	0.030
849:	39	4	36	38	4	35	210297.1730	-0.0069	0.030
850:	40	4	36	39	4	35	216383.9770	-0.0125	0.030
851:	40	4	37	39	4	36	215690.6020	0.0246	0.030
852:	42	4	38	41	4	37	227404.3920	-0.0023	0.030
853:	42	4	39	41	4	38	226468.5110	0.0017	0.030
854:	43	4	39	42	4	38	232930.0900	-0.0047	0.030
855:	43	4	40	42	4	39	231852.2450	-0.0047	0.030
856:	44	4	40	43	4	39	238466.2380	-0.0027	0.030
857:	44	4	41	43	4	40	237231.9790	0.0068	0.030
858:	45	4	41	44	4	40	244012.6790	-0.0182	0.030
859:	45	4	42	44	4	41	242607.2860	0.0098	0.030
860:	46	4	42	45	4	41	249569.1010	-0.0198	0.030
861:	46	4	43	45	4	42	247977.7540	-0.0116	0.030
862:	47	4	43	46	4	42	255134.9410	0.0034	0.030
863:	47	4	44	46	4	43	253343.0640	0.0124	0.030
864:	48	4	44	47	4	43	260709.3360	0.0074	0.030
865:	48	4	45	47	4	44	258702.7340	-0.0209	0.030
866:	49	4	45	48	4	44	266291.2240	-0.0001	0.030
867:	49	4	46	48	4	45	264056.5210	0.0117	0.030
868:	50	4	46	49	4	45	271879.3060	-0.0028	0.030
869:	50	4	47	49	4	46	269403.9570	-0.0061	0.030
870:	51	4	47	50	4	46	277472.0310	-0.0075	0.030
871:	51	4	48	50	4	47	274744.7830	0.0003	0.030
872:	52	4	49	51	4	48	280078.6570	0.0038	0.030
873:	53	4	49	52	4	48	288664.3010	0.0107	0.030
874:	53	4	50	52	4	49	285405.2880	0.0068	0.030
875:	54	4	50	53	4	49	294259.8680	-0.0127	0.030
876:	54	4	51	53	4	50	290724.4020	0.0060	0.030
877:	55	4	51	54	4	50	299852.3300	-0.0194	0.030
878:	55	4	52	54	4	51	296035.7280	-0.0229	0.030
879:	56	4	52	55	4	51	305439.5510	-0.0411	0.030
880:	56	4	53	55	4	52	301339.1440	0.0194	0.030
881:	57	4	53	56	4	52	311019.5070	-0.0316	0.030
882:	57	4	54	56	4	53	306634.3660	0.0446	0.030
883:	58	4	54	57	4	53	316590.2020	0.0051	0.030
884:	58	4	55	57	4	54	311921.1920	0.0194	0.030
885:	59	4	55	58	4	54	322149.6750	-0.0119	0.030
886:	59	4	56	58	4	55	317199.5540	0.0176	0.030
887:	60	4	56	59	4	55	327696.2720	0.0040	0.030
888:	60	4	57	59	4	56	322469.2600	-0.0385	0.030
889:	61	4	58	60	4	57	327730.3980	0.0258	0.030
890:	28	5	23	27	5	22	150815.8350	-0.0261	0.030
891:	28	5	24	27	5	23	150813.5960	0.0474	0.030
892:	29	5	24	28	5	23	156211.5400	-0.0192	0.030
893:	29	5	25	28	5	24	156208.4340	0.0379	0.030
894:	30	5	25	29	5	24	161608.3210	-0.0136	0.030
895:	30	5	26	29	5	25	161604.0980	0.0412	0.030
896:	31	5	26	30	5	25	167006.2300	-0.0264	0.030
897:	31	5	27	30	5	26	167000.5600	0.0280	0.030
898:	32	5	27	31	5	26	172405.3860	-0.0160	0.030
899:	32	5	28	31	5	27	172397.8320	0.0144	0.030
900:	33	5	28	32	5	27	177805.8660	0.0077	0.030
901:	33	5	29	32	5	28	177795.9090	0.0061	0.030
902:	34	5	29	33	5	28	183207.7070	-0.0152	0.030
903:	34	5	30	33	5	29	183194.7560	-0.0139	0.030
904:	35	5	30	34	5	29	188611.0890	-0.0148	0.030
905:	35	5	31	34	5	30	188594.3870	-0.0055	0.030

906:	36	5	31	35	5	30	194016.1080	-0.0181	0.030		
907:	36	5	32	35	5	31	193994.7390	0.0039	0.030		
908:	37	5	32	36	5	31	199422.9040	-0.0238	0.030		
909:	37	5	33	36	5	32	199395.7710	0.0191	0.030		
910:	38	5	33	37	5	32	204831.6410	-0.0235	0.030		
911:	38	5	34	37	5	33	204797.3920	0.0059	0.030		
912:	39	5	34	38	5	33	210242.5000	-0.0108	0.030		
913:	39	5	35	38	5	34	210199.5470	-0.0211	0.030		
914:	40	5	35	39	5	34	215655.6390	-0.0225	0.030		
915:	42	5	38	41	5	37	226408.5150	0.0104	0.030		
916:	43	5	38	42	5	37	231911.2280	-0.0034	0.030		
917:	43	5	39	42	5	38	231811.8860	-0.0196	0.030		
918:	44	5	39	43	5	38	237336.0170	0.0015	0.030		
919:	44	5	40	43	5	39	237215.2890	-0.0010	0.030		
920:	45	5	40	44	5	39	242764.4350	-0.0047	0.030		
921:	45	5	41	44	5	40	242618.4990	0.0035	0.030		
922:	46	5	41	45	5	40	248196.8410	-0.0104	0.030		
923:	46	5	42	45	5	41	248021.3330	-0.0085	0.030		
924:	47	5	42	46	5	41	253633.6170	-0.0073	0.030		
925:	47	5	43	46	5	42	253423.6040	-0.0258	0.030		
926:	48	5	43	47	5	42	259075.1470	-0.0113	0.030		
927:	48	5	44	47	5	43	258825.1510	0.0071	0.030		
928:	49	5	44	48	5	43	264521.8730	-0.0037	0.030		
929:	49	5	45	48	5	44	264225.6610	0.0123	0.030		
930:	50	5	45	49	5	44	269974.2260	0.0028	0.030		
931:	50	5	46	49	5	45	269624.8930	0.0012	0.030		
932:	51	5	46	50	5	45	275432.6490	-0.0070	0.030		
933:	51	5	47	50	5	46	275022.6070	0.0033	0.030		
934:	52	5	47	51	5	46	280897.6320	-0.0103	0.030		
935:	52	5	48	51	5	47	280418.5140	0.0155	0.030		
936:	53	5	48	52	5	47	286369.6530	0.0042	0.030		
937:	53	5	49	52	5	48	285812.2760	0.0007	0.030		
938:	54	5	49	53	5	48	291849.1250	-0.0055	0.030		
939:	54	5	50	53	5	49	291203.6310	0.0115	0.030		
940:	55	5	50	54	5	49	297336.5360	0.0175	0.030		
941:	55	5	51	54	5	50	296592.2050	0.0009	0.030		
942:	56	5	51	55	5	50	302832.2160	0.0129	0.030		
943:	56	5	52	55	5	51	301977.6860	-0.0059	0.030		
944:	57	5	52	56	5	51	308336.5700	0.0535	0.030		
945:	57	5	53	56	5	52	307359.7420	0.0045	0.030		
946:	58	5	53	57	5	52	313849.7430	0.0303	0.030		
947:	58	5	54	57	5	53	312738.0000	0.0114	0.030		
948:	59	5	54	58	5	53	319371.9430	-0.0022	0.030		
949:	59	5	55	58	5	54	318112.0600	-0.0292	0.030		
950:	60	5	55	59	5	54	324903.2280	-0.0171	0.030		
951:	60	5	56	59	5	55	323481.6980	0.0160	0.030		
952:	61	5	57	60	5	56	328846.4260	0.0164	0.030		
953:	28	6	22	27	6	21	150802.8630	-0.0287	0.030	-0.0043	0.50
954:	28	6	23	27	6	22	150802.8630	0.0201	0.030	-0.0043	0.50
955:	29	6	23	28	6	22	156191.5410	-0.0388	0.030	-0.0029	0.50
956:	29	6	24	28	6	23	156191.5410	0.0330	0.030	-0.0029	0.50
957:	30	6	24	29	6	23	161580.4800	-0.0749	0.030	-0.0227	0.50
958:	30	6	25	29	6	24	161580.4800	0.0294	0.030	-0.0227	0.50
959:	31	6	25	30	6	24	166969.7500	-0.0760	0.030	-0.0013	0.50
960:	31	6	26	30	6	25	166969.7500	0.0734	0.030	-0.0013	0.50
961:	32	6	26	31	6	25	172359.2880	-0.1149	0.030	-0.0092	0.50
962:	32	6	27	31	6	26	172359.2880	0.0964	0.030	-0.0092	0.50
963:	33	6	27	32	6	26	177749.1670	-0.1291	0.030	0.0188	0.50
964:	33	6	28	32	6	27	177749.1670	0.1667	0.030	0.0188	0.50
965:	35	6	29	34	6	28	188530.0050	-0.0721	0.030		
966:	36	6	30	35	6	29	193920.9350	-0.0559	0.030		

967:	36	6	31	35	6	30	193920.2980	0.0692	0.030		
968:	37	6	31	36	6	30	199312.2020	-0.0714	0.030		
969:	37	6	32	36	6	31	199311.2700	0.0219	0.030		
970:	38	6	32	37	6	31	204703.9220	-0.0198	0.030		
971:	38	6	33	37	6	32	204702.6200	0.0459	0.030		
972:	39	6	33	38	6	32	210095.9730	-0.0426	0.030		
973:	39	6	34	38	6	33	210094.2160	0.0101	0.030		
974:	40	6	34	39	6	33	215488.4780	-0.0392	0.030		
975:	40	6	35	39	6	34	215486.1550	0.0140	0.030		
976:	42	6	36	41	6	35	226274.8770	-0.0322	0.030		
977:	42	6	37	41	6	36	226270.9130	0.0123	0.030		
978:	43	6	37	42	6	36	231668.8390	-0.0233	0.030		
979:	43	6	38	42	6	37	231663.7250	0.0160	0.030		
980:	44	6	38	43	6	37	237063.3820	0.0119	0.030		
981:	44	6	39	43	6	38	237056.8070	0.0197	0.030		
982:	45	6	39	44	6	38	242458.4580	-0.0184	0.030		
983:	45	6	40	44	6	39	242450.1390	0.0195	0.030		
984:	46	6	40	45	6	39	247854.2150	-0.0173	0.030		
985:	46	6	41	45	6	40	247843.6960	0.0102	0.030		
986:	47	6	42	46	6	41	253237.4770	0.0156	0.030		
987:	48	6	42	47	6	41	258647.9050	-0.0282	0.030		
988:	48	6	43	47	6	42	258631.4190	0.0022	0.030		
989:	49	6	43	48	6	42	264046.0100	-0.0102	0.030		
990:	49	6	44	48	6	43	264025.5080	-0.0085	0.030		
991:	50	6	44	49	6	43	269445.0470	0.0041	0.030		
992:	50	6	45	49	6	44	269419.7210	0.0020	0.030		
993:	51	6	45	50	6	44	274845.1020	0.0035	0.030		
994:	51	6	46	50	6	45	274813.9690	-0.0061	0.030		
995:	52	6	46	51	6	45	280246.3060	0.0089	0.030		
996:	52	6	47	51	6	46	280208.2360	0.0074	0.030		
997:	53	6	47	52	6	46	285648.7700	0.0073	0.030		
998:	53	6	48	52	6	47	285602.4030	-0.0110	0.030		
999:	54	6	48	53	6	47	291052.6320	-0.0020	0.030		
1000:	54	6	49	53	6	48	290996.4730	0.0155	0.030		
1001:	55	6	49	54	6	48	296458.0810	0.0144	0.030		
1002:	55	6	50	54	6	49	296390.3010	0.0264	0.030		
1003:	56	6	50	55	6	49	301865.2170	-0.0157	0.030		
1004:	56	6	51	55	6	50	301783.7930	0.0224	0.030		
1005:	57	6	51	56	6	50	307274.3210	-0.0031	0.030		
1006:	57	6	52	56	6	51	307176.8980	0.0586	0.030		
1007:	58	6	52	57	6	51	312685.5600	0.0085	0.030		
1008:	58	6	53	57	6	52	312569.3630	0.0000	0.030		
1009:	59	6	53	58	6	52	318099.1490	0.0026	0.030		
1010:	59	6	54	58	6	53	317961.2280	0.0169	0.030		
1011:	60	6	54	59	6	53	323515.3390	-0.0223	0.030		
1012:	60	6	55	59	6	54	323352.2070	-0.0330	0.030		
1013:	61	6	55	60	6	54	328934.4660	-0.0047	0.030		
1014:	61	6	56	60	6	55	328742.3020	0.0087	0.030		
1015:	28	7	21	27	7	20	150836.9620	-0.0174	0.030	-0.0171	0.50
1016:	28	7	22	27	7	21	150836.9620	-0.0167	0.030	-0.0171	0.50
1017:	29	7	22	28	7	21	156223.2680	-0.0129	0.030	-0.0124	0.50
1018:	29	7	23	28	7	22	156223.2680	-0.0118	0.030	-0.0124	0.50
1019:	30	7	23	29	7	22	161609.4930	0.0038	0.030	0.0047	0.50
1020:	30	7	24	29	7	23	161609.4930	0.0055	0.030	0.0047	0.50
1021:	31	7	24	30	7	23	166995.6100	0.0116	0.030	0.0129	0.50
1022:	31	7	25	30	7	24	166995.6100	0.0142	0.030	0.0129	0.50
1023:	32	7	25	31	7	24	172381.5970	-0.0061	0.030	-0.0042	0.50
1024:	32	7	26	31	7	25	172381.5970	-0.0022	0.030	-0.0042	0.50
1025:	33	7	26	32	7	25	177767.4900	-0.0075	0.030	-0.0046	0.50
1026:	33	7	27	32	7	26	177767.4900	-0.0017	0.030	-0.0046	0.50
1027:	34	7	27	33	7	26	183153.2600	-0.0157	0.030	-0.0115	0.50

1028:	34	7	28	33	7	27	183153.2600	-0.0071	0.030	-0.0115	0.50
1029:	35	7	28	34	7	27	188538.9100	-0.0218	0.030	-0.0156	0.50
1030:	35	7	29	34	7	28	188538.9100	-0.0092	0.030	-0.0156	0.50
1031:	36	7	29	35	7	28	193924.4570	-0.0027	0.030	0.0062	0.50
1032:	36	7	30	35	7	29	193924.4570	0.0152	0.030	0.0062	0.50
1033:	37	7	30	36	7	29	199309.8210	-0.0326	0.030	-0.0198	0.50
1034:	37	7	31	36	7	30	199309.8210	-0.0069	0.030	-0.0198	0.50
1035:	38	7	31	37	7	30	204695.0970	-0.0104	0.030	0.0076	0.50
1036:	38	7	32	37	7	31	204695.0970	0.0257	0.030	0.0076	0.50
1037:	39	7	32	38	7	31	210080.1690	-0.0463	0.030	-0.0211	0.50
1038:	39	7	33	38	7	32	210080.1690	0.0041	0.030	-0.0211	0.50
1039:	40	7	33	39	7	32	215465.1480	-0.0235	0.030	0.0114	0.50
1040:	40	7	34	39	7	33	215465.1480	0.0464	0.030	0.0114	0.50
1041:	42	7	35	41	7	34	226234.5350	-0.0716	0.030	-0.0065	0.50
1042:	42	7	36	41	7	35	226234.5350	0.0587	0.030	-0.0065	0.50
1043:	43	7	36	42	7	35	231618.9860	-0.0892	0.030	-0.0013	0.50
1044:	43	7	37	42	7	36	231618.9860	0.0867	0.030	-0.0013	0.50
1045:	44	7	37	43	7	36	237003.2570	-0.1146	0.030	0.0033	0.50
1046:	44	7	38	43	7	37	237003.2570	0.1212	0.030	0.0033	0.50
1047:	45	7	38	44	7	37	242387.3370	-0.1546	0.030	0.0022	0.50
1048:	45	7	39	44	7	38	242387.3370	0.1590	0.030	0.0022	0.50
1049:	46	7	39	45	7	38	247771.2330	-0.1987	0.030	0.0085	0.50
1050:	46	7	40	45	7	39	247771.2330	0.2156	0.030	0.0085	0.50
1051:	47	7	40	46	7	39	253155.1120	-0.0771	0.030		
1052:	47	7	41	46	7	40	253154.6930	0.0476	0.030		
1053:	49	7	42	48	7	41	263922.0690	-0.0808	0.030		
1054:	49	7	43	48	7	42	263921.2730	0.0424	0.030		
1055:	50	7	43	49	7	42	269305.3160	-0.0367	0.030		
1056:	50	7	44	49	7	43	269304.2110	0.0428	0.030		
1057:	51	7	44	50	7	43	274688.3410	-0.0316	0.030		
1058:	51	7	45	50	7	44	274686.8910	0.0363	0.030		
1059:	52	7	45	51	7	44	280071.1800	-0.0331	0.030		
1060:	52	7	46	51	7	45	280069.3050	0.0265	0.030		
1061:	53	7	46	52	7	45	285453.8540	-0.0258	0.030		
1062:	53	7	47	52	7	46	285451.4530	0.0259	0.030		
1063:	54	7	47	53	7	46	290836.3600	-0.0204	0.030		
1064:	54	7	48	53	7	47	290833.3150	0.0285	0.030		
1065:	55	7	48	54	7	47	296218.7170	-0.0084	0.030		
1066:	55	7	49	54	7	48	296214.8630	0.0214	0.030		
1067:	56	7	49	55	7	48	301600.9100	-0.0180	0.030		
1068:	56	7	50	55	7	49	301596.0900	0.0143	0.030		
1069:	57	7	50	56	7	49	306982.9350	-0.0699	0.030		
1070:	57	7	51	56	7	50	306976.9620	-0.0082	0.030		
1071:	58	7	51	57	7	50	312364.9800	0.0034	0.030		
1072:	58	7	52	57	7	51	312357.5210	0.0161	0.030		
1073:	59	7	52	58	7	51	317746.8800	0.0125	0.030		
1074:	59	7	53	58	7	52	317737.6710	0.0146	0.030		
1075:	60	7	53	59	7	52	323128.6660	-0.0412	0.030		
1076:	60	7	54	59	7	53	323117.4230	0.0237	0.030		
1077:	61	7	54	60	7	53	328510.5470	0.0163	0.030		
1078:	61	7	55	60	7	54	328496.7050	0.0002	0.030		
1079:	28	8	20	27	8	19	150900.4570	-0.0229	0.030	-0.0229	0.50
1080:	28	8	21	27	8	20	150900.4570	-0.0229	0.030	-0.0229	0.50
1081:	29	8	21	28	8	20	156286.7180	-0.0338	0.030	-0.0338	0.50
1082:	29	8	22	28	8	21	156286.7180	-0.0338	0.030	-0.0338	0.50
1083:	30	8	22	29	8	21	161672.6800	-0.0126	0.030	-0.0126	0.50
1084:	30	8	23	29	8	22	161672.6800	-0.0126	0.030	-0.0126	0.50
1085:	31	8	23	30	8	22	167058.2800	-0.0090	0.030	-0.0091	0.50
1086:	31	8	24	30	8	23	167058.2800	-0.0090	0.030	-0.0091	0.50
1087:	32	8	24	31	8	23	172443.5230	-0.0047	0.030	-0.0047	0.50
1088:	32	8	25	31	8	24	172443.5230	-0.0047	0.030	-0.0047	0.50

1089:	33	8	25	32	8	24	177828.3780	-0.0170	0.030	-0.0170	0.50
1090:	33	8	26	32	8	25	177828.3780	-0.0170	0.030	-0.0170	0.50
1091:	34	8	26	33	8	25	183212.8740	-0.0033	0.030	-0.0033	0.50
1092:	34	8	27	33	8	26	183212.8740	-0.0032	0.030	-0.0033	0.50
1093:	35	8	27	34	8	26	188596.9450	-0.0157	0.030	-0.0156	0.50
1094:	35	8	28	34	8	27	188596.9450	-0.0155	0.030	-0.0156	0.50
1095:	36	8	28	35	8	27	193980.6370	0.0057	0.030	0.0059	0.50
1096:	36	8	29	35	8	28	193980.6370	0.0060	0.030	0.0059	0.50
1097:	37	8	29	36	8	28	199363.8520	-0.0228	0.030	-0.0226	0.50
1098:	37	8	30	36	8	29	199363.8520	-0.0224	0.030	-0.0226	0.50
1099:	38	8	30	37	8	29	204746.6780	0.0007	0.030	0.0010	0.50
1100:	38	8	31	37	8	30	204746.6780	0.0014	0.030	0.0010	0.50
1101:	39	8	31	38	8	30	210129.0140	-0.0102	0.030	-0.0097	0.50
1102:	39	8	32	38	8	31	210129.0140	-0.0092	0.030	-0.0097	0.50
1103:	40	8	32	39	8	31	215510.8880	-0.0133	0.030	-0.0126	0.50
1104:	40	8	33	39	8	32	215510.8880	-0.0118	0.030	-0.0126	0.50
1105:	42	8	34	41	8	33	226273.1710	-0.0167	0.030	-0.0153	0.50
1106:	42	8	35	41	8	34	226273.1710	-0.0137	0.030	-0.0153	0.50
1107:	43	8	35	42	8	34	231653.5520	-0.0158	0.030	-0.0137	0.50
1108:	43	8	36	42	8	35	231653.5520	-0.0115	0.030	-0.0137	0.50
1109:	44	8	36	43	8	35	237033.4010	-0.0186	0.030	-0.0156	0.50
1110:	44	8	37	43	8	36	237033.4010	-0.0126	0.030	-0.0156	0.50
1111:	45	8	37	44	8	36	242412.7120	-0.0163	0.030	-0.0121	0.50
1112:	45	8	38	44	8	37	242412.7120	-0.0079	0.030	-0.0121	0.50
1113:	46	8	38	45	8	37	247791.4670	-0.0121	0.030	-0.0063	0.50
1114:	46	8	39	45	8	38	247791.4670	-0.0005	0.030	-0.0063	0.50
1115:	47	8	39	46	8	38	253169.6580	0.0007	0.030	0.0086	0.50
1116:	47	8	40	46	8	39	253169.6580	0.0165	0.030	0.0086	0.50
1117:	48	8	40	47	8	39	258547.2310	-0.0170	0.030	-0.0062	0.50
1118:	48	8	41	47	8	40	258547.2310	0.0045	0.030	-0.0062	0.50
1119:	49	8	41	48	8	40	263924.1670	-0.0696	0.030	-0.0550	0.50
1120:	49	8	42	48	8	41	263924.1670	-0.0404	0.030	-0.0550	0.50
1121:	50	8	42	49	8	41	269300.5830	-0.0253	0.030	-0.0058	0.50
1122:	50	8	43	49	8	42	269300.5830	0.0138	0.030	-0.0058	0.50
1123:	51	8	43	50	8	42	274676.3230	-0.0257	0.030	0.0004	0.50
1124:	51	8	44	50	8	43	274676.3230	0.0265	0.030	0.0004	0.50
1125:	52	8	44	51	8	43	280051.4020	-0.0413	0.030	-0.0066	0.50
1126:	52	8	45	51	8	44	280051.4020	0.0280	0.030	-0.0066	0.50
1127:	53	8	45	52	8	44	285425.8250	-0.0527	0.030	-0.0070	0.50
1128:	53	8	46	52	8	45	285425.8250	0.0387	0.030	-0.0070	0.50
1129:	54	8	46	53	8	45	290799.5630	-0.0749	0.030	-0.0149	0.50
1130:	54	8	47	53	8	46	290799.5630	0.0450	0.030	-0.0149	0.50
1131:	55	8	47	54	8	46	296172.6560	-0.0540	0.030	0.0242	0.50
1132:	55	8	48	54	8	47	296172.6560	0.1023	0.030	0.0242	0.50
1133:	58	8	50	57	8	49	312287.4810	-0.1833	0.030	-0.0154	0.50
1134:	58	8	51	57	8	50	312287.4810	0.1524	0.030	-0.0154	0.50
1135:	59	8	51	58	8	50	317657.6390	-0.2135	0.030	0.0009	0.50
1136:	59	8	52	58	8	51	317657.6390	0.2153	0.030	0.0009	0.50
1137:	61	8	53	60	8	52	328395.9500	-0.0134	0.030		
1138:	61	8	54	60	8	53	328395.3220	0.0487	0.030		
1139:	28	9	19	27	9	18	150985.7080	0.0014	0.030	0.0015	0.50
1140:	28	9	20	27	9	19	150985.7080	0.0014	0.030	0.0015	0.50
1141:	29	9	20	28	9	19	156373.4570	0.0016	0.030	0.0017	0.50
1142:	29	9	21	28	9	20	156373.4570	0.0016	0.030	0.0017	0.50
1143:	30	9	21	29	9	20	161760.7260	0.0142	0.030	0.0142	0.50
1144:	30	9	22	29	9	21	161760.7260	0.0142	0.030	0.0142	0.50
1145:	31	9	22	30	9	21	167147.4370	-0.0205	0.030	-0.0206	0.50
1146:	31	9	23	30	9	22	167147.4370	-0.0205	0.030	-0.0206	0.50
1147:	32	9	23	31	9	22	172533.6520	-0.0222	0.030	-0.0222	0.50
1148:	32	9	24	31	9	23	172533.6520	-0.0222	0.030	-0.0222	0.50
1149:	33	9	24	32	9	23	177919.3560	0.0127	0.030	0.0128	0.50

1150:	33	9	25	32	9	24	177919.3560	0.0127	0.030	0.0128	0.50
1151:	34	9	25	33	9	24	183304.4130	-0.0329	0.030	-0.0329	0.50
1152:	34	9	26	33	9	25	183304.4130	-0.0329	0.030	-0.0329	0.50
1153:	35	9	26	34	9	25	188688.9650	0.0013	0.030	0.0014	0.50
1154:	35	9	27	34	9	26	188688.9650	0.0013	0.030	0.0014	0.50
1155:	36	9	27	35	9	26	194072.8560	-0.0213	0.030	-0.0214	0.50
1156:	36	9	28	35	9	27	194072.8560	-0.0213	0.030	-0.0214	0.50
1157:	37	9	28	36	9	27	199456.1750	0.0066	0.030	0.0067	0.50
1158:	37	9	29	36	9	28	199456.1750	0.0067	0.030	0.0067	0.50
1159:	38	9	29	37	9	28	204838.7880	-0.0293	0.030	-0.0293	0.50
1160:	38	9	30	37	9	29	204838.7880	-0.0292	0.030	-0.0293	0.50
1161:	39	9	30	38	9	29	210220.8120	0.0068	0.030	0.0068	0.50
1162:	39	9	31	38	9	30	210220.8120	0.0068	0.030	0.0068	0.50
1163:	40	9	31	39	9	30	215602.1260	0.0132	0.030	-0.0211	0.33
1164:	40	9	32	39	9	31	215602.1260	0.0132	0.030	-0.0211	0.33
1165:	40	5	36	39	5	35	215602.1260	-0.0897	0.030	-0.0211	0.33
1166:	42	9	33	41	9	32	226362.5960	-0.0132	0.030	-0.0132	0.50
1167:	42	9	34	41	9	33	226362.5960	-0.0131	0.030	-0.0132	0.50
1168:	43	9	34	42	9	33	231741.7480	-0.0111	0.030	-0.0111	0.50
1169:	43	9	35	42	9	34	231741.7480	-0.0110	0.030	-0.0111	0.50
1170:	44	9	35	43	9	34	237120.1480	-0.0027	0.030	-0.0027	0.50
1171:	44	9	36	43	9	35	237120.1480	-0.0026	0.030	-0.0027	0.50
1172:	45	9	36	44	9	35	242497.7620	-0.0023	0.030	-0.0023	0.50
1173:	45	9	37	44	9	36	242497.7620	-0.0021	0.030	-0.0023	0.50
1174:	46	9	37	45	9	36	247874.5700	-0.0101	0.030	-0.0100	0.50
1175:	46	9	38	45	9	37	247874.5700	-0.0099	0.030	-0.0100	0.50
1176:	47	9	38	46	9	37	253250.5970	0.0187	0.030	0.0189	0.50
1177:	47	9	39	46	9	38	253250.5970	0.0190	0.030	0.0189	0.50
1178:	48	9	39	47	9	38	258625.7300	-0.0088	0.030	-0.0086	0.50
1179:	48	9	40	47	9	39	258625.7300	-0.0084	0.030	-0.0086	0.50
1180:	49	9	40	48	9	39	264000.0420	0.0000	0.030	0.0004	0.50
1181:	49	9	41	48	9	40	264000.0420	0.0007	0.030	0.0004	0.50
1182:	50	9	41	49	9	40	269373.4540	-0.0135	0.030	-0.0131	0.50
1183:	50	9	42	49	9	41	269373.4540	-0.0126	0.030	-0.0131	0.50
1184:	51	9	42	50	9	41	274745.9850	-0.0105	0.030	-0.0099	0.50
1185:	51	9	43	50	9	42	274745.9850	-0.0092	0.030	-0.0099	0.50
1186:	52	9	43	51	9	42	280117.5870	-0.0189	0.030	-0.0180	0.50
1187:	52	9	44	51	9	43	280117.5870	-0.0170	0.030	-0.0180	0.50
1188:	53	9	44	52	9	43	285488.2620	-0.0165	0.030	-0.0153	0.50
1189:	53	9	45	52	9	44	285488.2620	-0.0140	0.030	-0.0153	0.50
1190:	54	9	45	53	9	44	290857.9750	-0.0182	0.030	-0.0165	0.50
1191:	54	9	46	53	9	45	290857.9750	-0.0148	0.030	-0.0165	0.50
1192:	55	9	46	54	9	45	296226.7470	0.0170	0.030	0.0194	0.50
1193:	55	9	47	54	9	46	296226.7470	0.0217	0.030	0.0194	0.50
1194:	56	9	47	55	9	46	301594.4530	-0.0155	0.030	-0.0123	0.50
1195:	56	9	48	55	9	47	301594.4530	-0.0091	0.030	-0.0123	0.50
1196:	57	9	48	56	9	47	306961.2370	0.0482	0.030	0.0524	0.50
1197:	57	9	49	56	9	48	306961.2370	0.0566	0.030	0.0524	0.50
1198:	58	9	49	57	9	48	312326.8670	-0.0037	0.030	0.0019	0.50
1199:	58	9	50	57	9	49	312326.8670	0.0075	0.030	0.0019	0.50
1200:	59	9	50	58	9	49	317691.4970	0.0027	0.030	0.0102	0.50
1201:	59	9	51	58	9	50	317691.4970	0.0176	0.030	0.0102	0.50
1202:	60	9	51	59	9	50	323055.0600	0.0206	0.030	0.0305	0.50
1203:	60	9	52	59	9	51	323055.0600	0.0402	0.030	0.0305	0.50
1204:	61	9	52	60	9	51	328417.4700	-0.0161	0.030	-0.0033	0.50
1205:	61	9	53	60	9	52	328417.4700	0.0094	0.030	-0.0033	0.50
1206:	28	10	18	27	10	17	151088.6080	-0.0005	0.030	-0.0005	0.50
1207:	28	10	19	27	10	18	151088.6080	-0.0005	0.030	-0.0005	0.50
1208:	29	10	19	28	10	18	156478.9210	0.0109	0.030	0.0110	0.50
1209:	29	10	20	28	10	19	156478.9210	0.0109	0.030	0.0110	0.50
1210:	30	10	20	29	10	19	161868.6180	0.0141	0.030	0.0141	0.50

1211:	30	10	21	29	10	20	161868.6180	0.0141	0.030	0.0141	0.50
1212:	31	10	21	30	10	20	167257.6520	-0.0162	0.030	-0.0162	0.50
1213:	31	10	22	30	10	21	167257.6520	-0.0162	0.030	-0.0162	0.50
1214:	32	10	22	31	10	21	172646.0570	-0.0242	0.030	-0.0242	0.50
1215:	32	10	23	31	10	22	172646.0570	-0.0242	0.030	-0.0242	0.50
1216:	33	10	23	32	10	22	178033.8290	0.0082	0.030	0.0082	0.50
1217:	33	10	24	32	10	23	178033.8290	0.0082	0.030	0.0082	0.50
1218:	34	10	24	33	10	23	183420.8380	-0.0269	0.030	-0.0269	0.50
1219:	34	10	25	33	10	24	183420.8380	-0.0269	0.030	-0.0269	0.50
1220:	35	10	25	34	10	24	188807.1770	-0.0144	0.030	-0.0144	0.50
1221:	35	10	26	34	10	25	188807.1770	-0.0144	0.030	-0.0144	0.50
1222:	36	10	26	35	10	25	194192.7760	-0.0022	0.030	-0.0022	0.50
1223:	36	10	27	35	10	26	194192.7760	-0.0022	0.030	-0.0022	0.50
1224:	37	10	27	36	10	26	199577.5860	-0.0169	0.030	-0.0169	0.50
1225:	37	10	28	36	10	27	199577.5860	-0.0169	0.030	-0.0169	0.50
1226:	38	10	28	37	10	27	204961.6430	-0.0001	0.030	-0.0002	0.50
1227:	38	10	29	37	10	28	204961.6430	-0.0001	0.030	-0.0002	0.50
1228:	39	10	29	38	10	28	210344.8740	-0.0026	0.030	-0.0026	0.50
1229:	39	10	30	38	10	29	210344.8740	-0.0026	0.030	-0.0026	0.50
1230:	40	10	30	39	10	29	215727.2590	-0.0217	0.030	-0.0217	0.50
1231:	40	10	31	39	10	30	215727.2590	-0.0217	0.030	-0.0217	0.50
1232:	42	5	37	41	5	36	226489.5980	-0.1703	0.030	0.0015	0.33
1233:	42	10	32	41	10	31	226489.5980	0.0873	0.030	0.0015	0.33
1234:	42	10	33	41	10	32	226489.5980	0.0873	0.030	0.0015	0.33
1235:	43	10	33	42	10	32	231869.2710	-0.0201	0.030	-0.0201	0.50
1236:	43	10	34	42	10	33	231869.2710	-0.0201	0.030	-0.0201	0.50
1237:	44	10	34	43	10	33	237248.1340	-0.0177	0.030	-0.0177	0.50
1238:	44	10	35	43	10	34	237248.1340	-0.0176	0.030	-0.0177	0.50
1239:	45	10	35	44	10	34	242626.0560	-0.0135	0.030	-0.0135	0.50
1240:	45	10	36	44	10	35	242626.0560	-0.0135	0.030	-0.0135	0.50
1241:	46	10	36	45	10	35	248003.0160	-0.0057	0.030	-0.0057	0.50
1242:	46	10	37	45	10	36	248003.0160	-0.0057	0.030	-0.0057	0.50
1243:	47	10	37	46	10	36	253378.9710	-0.0143	0.030	-0.0144	0.50
1244:	47	10	38	46	10	37	253378.9710	-0.0143	0.030	-0.0144	0.50
1245:	48	10	38	47	10	37	258753.9070	-0.0305	0.030	-0.0305	0.50
1246:	48	10	39	47	10	38	258753.9070	-0.0305	0.030	-0.0305	0.50
1247:	49	10	39	48	10	38	264127.8450	-0.0102	0.030	-0.0102	0.50
1248:	49	10	40	48	10	39	264127.8450	-0.0102	0.030	-0.0102	0.50
1249:	50	10	40	49	10	39	269500.7150	-0.0003	0.030	-0.0003	0.50
1250:	50	10	41	49	10	40	269500.7150	-0.0003	0.030	-0.0003	0.50
1251:	51	10	41	50	10	40	274872.4700	-0.0247	0.030	-0.0248	0.50
1252:	51	10	42	50	10	41	274872.4700	-0.0247	0.030	-0.0248	0.50
1253:	52	10	42	51	10	41	280243.1660	-0.0044	0.030	-0.0044	0.50
1254:	52	10	43	51	10	42	280243.1660	-0.0043	0.030	-0.0044	0.50
1255:	53	10	43	52	10	42	285612.7050	-0.0141	0.030	-0.0141	0.50
1256:	53	10	44	52	10	43	285612.7050	-0.0140	0.030	-0.0141	0.50
1257:	54	10	44	53	10	43	290981.1200	0.0023	0.030	0.0024	0.50
1258:	54	10	45	53	10	44	290981.1200	0.0024	0.030	0.0024	0.50
1259:	55	10	45	54	10	44	296348.3420	-0.0008	0.030	-0.0008	0.50
1260:	55	10	46	54	10	45	296348.3420	-0.0007	0.030	-0.0008	0.50
1261:	56	10	46	55	10	45	301714.3650	-0.0064	0.030	-0.0064	0.50
1262:	56	10	47	55	10	46	301714.3650	-0.0063	0.030	-0.0064	0.50
1263:	57	10	47	56	10	46	307079.2000	0.0198	0.030	0.0199	0.50
1264:	57	10	48	56	10	47	307079.2000	0.0200	0.030	0.0199	0.50
1265:	58	10	48	57	10	47	312442.7300	-0.0158	0.030	-0.0157	0.50
1266:	58	10	49	57	10	48	312442.7300	-0.0155	0.030	-0.0157	0.50
1267:	59	10	49	58	10	48	317805.0580	0.0128	0.030	0.0131	0.50
1268:	59	10	50	58	10	49	317805.0580	0.0132	0.030	0.0131	0.50
1269:	60	10	50	59	10	49	323166.0750	0.0202	0.030	0.0205	0.50
1270:	60	10	51	59	10	50	323166.0750	0.0207	0.030	0.0205	0.50
1271:	61	10	51	60	10	50	328525.7440	-0.0076	0.030	-0.0072	0.50

1272:	61	10	52	60	10	51	328525.7440	-0.0068	0.030	-0.0072	0.50
1273:	28	11	17	27	11	16	151206.8150	0.0085	0.030	0.0085	0.50
1274:	28	11	18	27	11	17	151206.8150	0.0085	0.030	0.0085	0.50
1275:	29	11	18	28	11	17	156600.4860	-0.0070	0.030	-0.0070	0.50
1276:	29	11	19	28	11	18	156600.4860	-0.0070	0.030	-0.0070	0.50
1277:	30	11	19	29	11	18	161993.4810	-0.0051	0.030	-0.0051	0.50
1278:	30	11	20	29	11	19	161993.4810	-0.0051	0.030	-0.0051	0.50
1279:	31	11	20	30	11	19	167385.7620	0.0006	0.030	0.0006	0.50
1280:	31	11	21	30	11	20	167385.7620	0.0006	0.030	0.0006	0.50
1281:	32	11	21	31	11	20	172777.2950	0.0007	0.030	0.0008	0.50
1282:	32	11	22	31	11	21	172777.2950	0.0007	0.030	0.0008	0.50
1283:	33	11	22	32	11	21	178168.0410	-0.0192	0.030	-0.0192	0.50
1284:	33	11	23	32	11	22	178168.0410	-0.0192	0.030	-0.0192	0.50
1285:	34	11	23	33	11	22	183558.0380	0.0031	0.030	0.0032	0.50
1286:	34	11	24	33	11	23	183558.0380	0.0031	0.030	0.0032	0.50
1287:	35	11	24	34	11	23	188947.1950	0.0016	0.030	0.0016	0.50
1288:	35	11	25	34	11	24	188947.1950	0.0016	0.030	0.0016	0.50
1289:	36	11	25	35	11	24	194335.4900	-0.0212	0.030	-0.0213	0.50
1290:	36	11	26	35	11	25	194335.4900	-0.0212	0.030	-0.0213	0.50
1291:	37	11	26	36	11	25	199722.9730	0.0092	0.030	0.0092	0.50
1292:	37	11	27	36	11	26	199722.9730	0.0092	0.030	0.0092	0.50
1293:	38	11	27	37	11	26	205109.4960	-0.0302	0.030	-0.0302	0.50
1294:	38	11	28	37	11	27	205109.4960	-0.0302	0.030	-0.0302	0.50
1295:	39	11	28	38	11	27	210495.1720	-0.0018	0.030	-0.0019	0.50
1296:	39	11	29	38	11	28	210495.1720	-0.0018	0.030	-0.0019	0.50
1297:	40	11	29	39	11	28	215879.8480	-0.0338	0.030	-0.0338	0.50
1298:	40	11	30	39	11	29	215879.8480	-0.0338	0.030	-0.0338	0.50
1299:	42	11	31	41	11	30	226646.3680	-0.0114	0.030	-0.0114	0.50
1300:	42	11	32	41	11	31	226646.3680	-0.0114	0.030	-0.0114	0.50
1301:	43	11	32	42	11	31	232028.0990	-0.0203	0.030	-0.0203	0.50
1302:	43	11	33	42	11	32	232028.0990	-0.0203	0.030	-0.0203	0.50
1303:	44	11	33	43	11	32	237408.8070	-0.0129	0.030	-0.0130	0.50
1304:	44	11	34	43	11	33	237408.8070	-0.0129	0.030	-0.0130	0.50
1305:	45	11	34	44	11	33	242788.4430	-0.0135	0.030	-0.0135	0.50
1306:	45	11	35	44	11	34	242788.4430	-0.0135	0.030	-0.0135	0.50
1307:	46	11	35	45	11	34	248167.0000	-0.0039	0.030	-0.0039	0.50
1308:	46	11	36	45	11	35	248167.0000	-0.0039	0.030	-0.0039	0.50
1309:	47	11	36	46	11	35	253544.4220	-0.0151	0.030	-0.0151	0.50
1310:	47	11	37	46	11	36	253544.4220	-0.0151	0.030	-0.0151	0.50
1311:	48	11	37	47	11	36	258920.7010	-0.0300	0.030	-0.0301	0.50
1312:	48	11	38	47	11	37	258920.7010	-0.0300	0.030	-0.0301	0.50
1313:	49	11	38	48	11	37	264295.8490	-0.0117	0.030	-0.0118	0.50
1314:	49	11	39	48	11	38	264295.8490	-0.0117	0.030	-0.0118	0.50
1315:	50	11	39	49	11	38	269669.7890	-0.0121	0.030	-0.0121	0.50
1316:	50	11	40	49	11	39	269669.7890	-0.0121	0.030	-0.0121	0.50
1317:	51	11	40	50	11	39	275042.5060	-0.0209	0.030	-0.0210	0.50
1318:	51	11	41	50	11	40	275042.5060	-0.0209	0.030	-0.0210	0.50
1319:	52	11	41	51	11	40	280414.0090	-0.0042	0.030	-0.0042	0.50
1320:	52	11	42	51	11	41	280414.0090	-0.0042	0.030	-0.0042	0.50
1321:	53	11	42	52	11	41	285784.2200	-0.0147	0.030	-0.0148	0.50
1322:	53	11	43	52	11	42	285784.2200	-0.0147	0.030	-0.0148	0.50
1323:	54	11	43	53	11	42	291153.1670	0.0005	0.030	0.0005	0.50
1324:	54	11	44	53	11	43	291153.1670	0.0005	0.030	0.0005	0.50
1325:	55	11	44	54	11	43	296520.7610	-0.0221	0.030	-0.0222	0.50
1326:	55	11	45	54	11	44	296520.7610	-0.0221	0.030	-0.0222	0.50
1327:	56	11	45	55	11	44	301887.0590	-0.0007	0.030	-0.0007	0.50
1328:	56	11	46	55	11	45	301887.0590	-0.0007	0.030	-0.0007	0.50
1329:	57	11	46	56	11	45	307251.9350	-0.0360	0.030	-0.0360	0.50
1330:	57	11	47	56	11	46	307251.9350	-0.0360	0.030	-0.0360	0.50
1331:	58	11	47	57	11	46	312615.4630	-0.0288	0.030	-0.0289	0.50
1332:	58	11	48	57	11	47	312615.4630	-0.0288	0.030	-0.0289	0.50

1333:	59	11	48	58	11	47	317977.6100	0.0128	0.030	0.0129	0.50
1334:	59	11	49	58	11	48	317977.6100	0.0128	0.030	0.0129	0.50
1335:	60	11	49	59	11	48	323338.2610	-0.0007	0.030	-0.0008	0.50
1336:	60	11	50	59	11	49	323338.2610	-0.0007	0.030	-0.0008	0.50
1337:	61	11	50	60	11	49	328697.4390	-0.0215	0.030	-0.0216	0.50
1338:	61	11	51	60	11	50	328697.4390	-0.0215	0.030	-0.0216	0.50
1339:	28	12	16	27	12	15	151338.7640	-0.0043	0.030	-0.0043	0.50
1340:	28	12	17	27	12	16	151338.7640	-0.0043	0.030	-0.0043	0.50
1341:	29	12	17	28	12	16	156736.5360	0.0122	0.030	0.0123	0.50
1342:	29	12	18	28	12	17	156736.5360	0.0122	0.030	0.0123	0.50
1343:	30	12	18	29	12	17	162133.5250	0.0053	0.030	0.0053	0.50
1344:	30	12	19	29	12	18	162133.5250	0.0053	0.030	0.0053	0.50
1345:	31	12	19	30	12	18	167529.7240	-0.0057	0.030	-0.0057	0.50
1346:	31	12	20	30	12	19	167529.7240	-0.0057	0.030	-0.0057	0.50
1347:	32	12	20	31	12	19	172925.1250	-0.0024	0.030	-0.0025	0.50
1348:	32	12	21	31	12	20	172925.1250	-0.0024	0.030	-0.0025	0.50
1349:	33	12	21	32	12	20	178319.6690	-0.0174	0.030	-0.0174	0.50
1350:	33	12	22	32	12	21	178319.6690	-0.0174	0.030	-0.0174	0.50
1351:	34	12	22	33	12	21	183713.3920	0.0118	0.030	0.0119	0.50
1352:	34	12	23	33	12	22	183713.3920	0.0118	0.030	0.0119	0.50
1353:	35	12	23	34	12	22	189106.1770	-0.0051	0.030	-0.0051	0.50
1354:	35	12	24	34	12	23	189106.1770	-0.0051	0.030	-0.0051	0.50
1355:	36	12	24	35	12	23	194498.0540	-0.0118	0.030	-0.0119	0.50
1356:	36	12	25	35	12	24	194498.0540	-0.0118	0.030	-0.0119	0.50
1357:	37	12	25	36	12	24	199889.0200	0.0150	0.030	0.0151	0.50
1358:	37	12	26	36	12	25	199889.0200	0.0150	0.030	0.0151	0.50
1359:	38	12	26	37	12	25	205278.9570	-0.0157	0.030	-0.0157	0.50
1360:	38	12	27	37	12	26	205278.9570	-0.0157	0.030	-0.0157	0.50
1361:	39	12	27	38	12	26	210667.9480	0.0052	0.030	0.0053	0.50
1362:	39	12	28	38	12	27	210667.9480	0.0052	0.030	0.0053	0.50
1363:	40	12	28	39	12	27	216055.8770	-0.0114	0.030	-0.0114	0.50
1364:	40	12	29	39	12	28	216055.8770	-0.0114	0.030	-0.0114	0.50
1365:	42	12	30	41	12	29	226828.5950	-0.0056	0.030	-0.0057	0.50
1366:	42	12	31	41	12	30	226828.5950	-0.0056	0.030	-0.0057	0.50
1367:	43	12	31	42	12	30	232213.3120	-0.0021	0.030	-0.0022	0.50
1368:	43	12	32	42	12	31	232213.3120	-0.0021	0.030	-0.0022	0.50
1369:	44	12	32	43	12	31	237596.8840	-0.0130	0.030	-0.0131	0.50
1370:	44	12	33	43	12	32	237596.8840	-0.0130	0.030	-0.0131	0.50
1371:	45	12	33	44	12	32	242979.3090	-0.0138	0.030	-0.0139	0.50
1372:	45	12	34	44	12	33	242979.3090	-0.0138	0.030	-0.0139	0.50
1373:	46	12	34	45	12	33	248360.5460	-0.0190	0.030	-0.0190	0.50
1374:	46	12	35	45	12	34	248360.5460	-0.0190	0.030	-0.0190	0.50
1375:	47	12	35	46	12	34	253740.5880	-0.0089	0.030	-0.0089	0.50
1376:	47	12	36	46	12	35	253740.5880	-0.0089	0.030	-0.0089	0.50
1377:	48	12	36	47	12	35	259119.3880	-0.0040	0.030	-0.0040	0.50
1378:	48	12	37	47	12	36	259119.3880	-0.0040	0.030	-0.0040	0.50
1379:	49	12	37	48	12	36	264496.9150	-0.0087	0.030	-0.0088	0.50
1380:	49	12	38	48	12	37	264496.9150	-0.0087	0.030	-0.0088	0.50
1381:	50	12	38	49	12	37	269873.1540	-0.0116	0.030	-0.0116	0.50
1382:	50	12	39	49	12	38	269873.1540	-0.0116	0.030	-0.0116	0.50
1383:	51	12	39	50	12	38	275248.0730	-0.0180	0.030	-0.0180	0.50
1384:	51	12	40	50	12	39	275248.0730	-0.0180	0.030	-0.0180	0.50
1385:	52	12	40	51	12	39	280621.6540	-0.0194	0.030	-0.0194	0.50
1386:	52	12	41	51	12	40	280621.6540	-0.0194	0.030	-0.0194	0.50
1387:	53	12	41	52	12	40	285993.8710	-0.0154	0.030	-0.0154	0.50
1388:	53	12	42	52	12	41	285993.8710	-0.0154	0.030	-0.0154	0.50
1389:	54	12	42	53	12	41	291364.7040	0.0006	0.030	0.0006	0.50
1390:	54	12	43	53	12	42	291364.7040	0.0006	0.030	0.0006	0.50
1391:	55	12	43	54	12	42	296734.0950	-0.0029	0.030	-0.0029	0.50
1392:	55	12	44	54	12	43	296734.0950	-0.0029	0.030	-0.0029	0.50
1393:	56	12	44	55	12	43	302102.0370	-0.0065	0.030	-0.0065	0.50

1394:	56	12	45	55	12	44	302102.0370	-0.0065	0.030	-0.0065	0.50
1395:	57	12	45	56	12	44	307468.5140	0.0002	0.030	0.0002	0.50
1396:	57	12	46	56	12	45	307468.5140	0.0002	0.030	0.0002	0.50
1397:	58	12	46	57	12	45	312833.4560	-0.0262	0.030	-0.0263	0.50
1398:	58	12	47	57	12	46	312833.4560	-0.0262	0.030	-0.0263	0.50
1399:	59	12	47	58	12	46	318196.9370	0.0143	0.030	0.0144	0.50
1400:	59	12	48	58	12	47	318196.9370	0.0143	0.030	0.0144	0.50
1401:	60	12	48	59	12	47	323558.8020	-0.0065	0.030	-0.0065	0.50
1402:	60	12	49	59	12	48	323558.8020	-0.0065	0.030	-0.0065	0.50
1403:	61	12	49	60	12	48	328919.0850	-0.0286	0.030	-0.0286	0.50
1404:	61	12	50	60	12	49	328919.0850	-0.0286	0.030	-0.0286	0.50
1405:	28	13	15	27	13	14	151483.4330	0.0099	0.030	0.0100	0.50
1406:	28	13	16	27	13	15	151483.4330	0.0099	0.030	0.0100	0.50
1407:	29	13	16	28	13	15	156885.8210	-0.0133	0.030	-0.0133	0.50
1408:	29	13	17	28	13	16	156885.8210	-0.0133	0.030	-0.0133	0.50
1409:	30	13	17	29	13	16	162287.4220	-0.0117	0.030	-0.0118	0.50
1410:	30	13	18	29	13	17	162287.4220	-0.0117	0.030	-0.0118	0.50
1411:	31	13	18	30	13	17	167688.1900	-0.0035	0.030	-0.0035	0.50
1412:	31	13	19	30	13	18	167688.1900	-0.0035	0.030	-0.0035	0.50
1413:	32	13	19	31	13	18	173088.0810	-0.0044	0.030	-0.0045	0.50
1414:	32	13	20	31	13	19	173088.0810	-0.0044	0.030	-0.0045	0.50
1415:	33	13	20	32	13	19	178487.0740	-0.0077	0.030	-0.0077	0.50
1416:	33	13	21	32	13	20	178487.0740	-0.0077	0.030	-0.0077	0.50
1417:	34	13	21	33	13	20	183885.1830	0.0287	0.030	0.0288	0.50
1418:	34	13	22	33	13	21	183885.1830	0.0287	0.030	0.0288	0.50
1419:	35	13	22	34	13	21	189282.3000	0.0249	0.030	0.0249	0.50
1420:	35	13	23	34	13	22	189282.3000	0.0249	0.030	0.0249	0.50
1421:	36	13	23	35	13	22	194678.4070	-0.0093	0.030	-0.0093	0.50
1422:	36	13	24	35	13	23	194678.4070	-0.0093	0.030	-0.0093	0.50
1423:	37	13	24	36	13	23	200073.5450	-0.0049	0.030	-0.0050	0.50
1424:	37	13	25	36	13	24	200073.5450	-0.0049	0.030	-0.0050	0.50
1425:	38	13	25	37	13	24	205467.6620	0.0138	0.030	0.0138	0.50
1426:	38	13	26	37	13	25	205467.6620	0.0138	0.030	0.0138	0.50
1427:	39	13	26	38	13	25	210860.6840	0.0010	0.030	0.0010	0.50
1428:	39	13	27	38	13	26	210860.6840	0.0010	0.030	0.0010	0.50
1429:	40	13	27	39	13	26	216252.6260	-0.0004	0.030	-0.0004	0.50
1430:	40	13	28	39	13	27	216252.6260	-0.0004	0.030	-0.0004	0.50
1431:	42	13	29	41	13	28	227033.1300	0.0020	0.030	0.0021	0.50
1432:	42	13	30	41	13	29	227033.1300	0.0020	0.030	0.0021	0.50
1433:	43	13	30	42	13	29	232421.6230	-0.0072	0.030	-0.0073	0.50
1434:	43	13	31	42	13	30	232421.6230	-0.0072	0.030	-0.0073	0.50
1435:	44	13	31	43	13	30	237808.9250	-0.0048	0.030	-0.0048	0.50
1436:	44	13	32	43	13	31	237808.9250	-0.0048	0.030	-0.0048	0.50
1437:	45	13	32	44	13	31	243194.9940	-0.0048	0.030	-0.0049	0.50
1438:	45	13	33	44	13	32	243194.9940	-0.0048	0.030	-0.0049	0.50
1439:	46	13	33	45	13	32	248579.7980	-0.0115	0.030	-0.0116	0.50
1440:	46	13	34	45	13	33	248579.7980	-0.0115	0.030	-0.0116	0.50
1441:	47	13	34	46	13	33	253963.3320	-0.0022	0.030	-0.0022	0.50
1442:	47	13	35	46	13	34	253963.3320	-0.0022	0.030	-0.0022	0.50
1443:	48	13	35	47	13	34	259345.5380	-0.0070	0.030	-0.0071	0.50
1444:	48	13	36	47	13	35	259345.5380	-0.0070	0.030	-0.0071	0.50
1445:	49	13	36	48	13	35	264726.4270	0.0125	0.030	0.0126	0.50
1446:	49	13	37	48	13	36	264726.4270	0.0125	0.030	0.0126	0.50
1447:	50	13	37	49	13	36	270105.9170	0.0024	0.030	0.0024	0.50
1448:	50	13	38	49	13	37	270105.9170	0.0024	0.030	0.0024	0.50
1449:	51	13	38	50	13	37	275484.0020	-0.0159	0.030	-0.0160	0.50
1450:	51	13	39	50	13	38	275484.0020	-0.0159	0.030	-0.0160	0.50
1451:	52	13	39	51	13	38	280860.6990	0.0020	0.030	0.0020	0.50
1452:	52	13	40	51	13	39	280860.6990	0.0020	0.030	0.0020	0.50
1453:	53	13	40	52	13	39	286235.9160	-0.0080	0.030	-0.0081	0.50
1454:	53	13	41	52	13	40	286235.9160	-0.0080	0.030	-0.0081	0.50

1455:	54	13	41	53	13	40	291609.6610	-0.0106	0.030	-0.0107	0.50
1456:	54	13	42	53	13	41	291609.6610	-0.0106	0.030	-0.0107	0.50
1457:	55	13	42	54	13	41	296981.9020	-0.0103	0.030	-0.0104	0.50
1458:	55	13	43	54	13	42	296981.9020	-0.0103	0.030	-0.0104	0.50
1459:	56	13	43	55	13	42	302352.5940	-0.0247	0.030	-0.0247	0.50
1460:	56	13	44	55	13	43	302352.5940	-0.0247	0.030	-0.0247	0.50
1461:	57	13	44	56	13	43	307721.7690	0.0056	0.030	0.0057	0.50
1462:	57	13	45	56	13	44	307721.7690	0.0056	0.030	0.0057	0.50
1463:	58	13	45	57	13	44	313089.3090	-0.0098	0.030	-0.0099	0.50
1464:	58	13	46	57	13	45	313089.3090	-0.0098	0.030	-0.0099	0.50
1465:	59	13	46	58	13	45	318455.2420	-0.0160	0.030	-0.0161	0.50
1466:	59	13	47	58	13	46	318455.2420	-0.0160	0.030	-0.0161	0.50
1467:	60	13	47	59	13	46	323819.5810	0.0272	0.030	0.0273	0.50
1468:	60	13	48	59	13	47	323819.5810	0.0272	0.030	0.0273	0.50
1469:	61	13	48	60	13	47	329182.1580	-0.0206	0.030	-0.0207	0.50
1470:	61	13	49	60	13	48	329182.1580	-0.0206	0.030	-0.0207	0.50
1471:	28	14	14	27	14	13	151639.9870	0.0219	0.030	0.0219	0.50
1472:	28	14	15	27	14	14	151639.9870	0.0219	0.030	0.0219	0.50
1473:	30	14	16	29	14	15	162454.2930	0.0078	0.030	0.0078	0.50
1474:	30	14	17	29	14	16	162454.2930	0.0078	0.030	0.0078	0.50
1475:	31	14	17	30	14	16	167860.1540	0.0195	0.030	0.0195	0.50
1476:	31	14	18	30	14	17	167860.1540	0.0195	0.030	0.0195	0.50
1477:	32	14	18	31	14	17	173265.1060	0.0350	0.030	0.0350	0.50
1478:	32	14	19	31	14	18	173265.1060	0.0350	0.030	0.0350	0.50
1479:	33	14	19	32	14	18	178669.0850	0.0195	0.030	0.0196	0.50
1480:	33	14	20	32	14	19	178669.0850	0.0195	0.030	0.0196	0.50
1481:	34	14	20	33	14	19	184072.0950	0.0063	0.030	0.0063	0.50
1482:	34	14	21	33	14	20	184072.0950	0.0063	0.030	0.0063	0.50
1483:	35	14	21	34	14	20	189474.1120	0.0004	0.030	0.0005	0.50
1484:	35	14	22	34	14	21	189474.1120	0.0004	0.030	0.0005	0.50
1485:	36	14	22	35	14	21	194875.1270	0.0221	0.030	0.0221	0.50
1486:	36	14	23	35	14	22	194875.1270	0.0221	0.030	0.0221	0.50
1487:	37	14	23	36	14	22	200275.0750	0.0354	0.030	0.0355	0.50
1488:	37	14	24	36	14	23	200275.0750	0.0354	0.030	0.0355	0.50
1489:	38	14	24	37	14	23	205673.9230	0.0364	0.030	0.0365	0.50
1490:	38	14	25	37	14	24	205673.9230	0.0364	0.030	0.0365	0.50
1491:	39	14	25	38	14	24	211071.6170	0.0001	0.030	0.0002	0.50
1492:	39	14	26	38	14	25	211071.6170	0.0001	0.030	0.0002	0.50
1493:	40	14	26	39	14	25	216468.2260	0.0246	0.030	0.0247	0.50
1494:	40	14	27	39	14	26	216468.2260	0.0246	0.030	0.0247	0.50
1495:	42	14	28	41	14	27	227257.8280	0.0106	0.030	0.0107	0.50
1496:	42	14	29	41	14	28	227257.8280	0.0106	0.030	0.0107	0.50
1497:	43	14	29	42	14	28	232650.8030	0.0120	0.030	0.0120	0.50
1498:	43	14	30	42	14	29	232650.8030	0.0120	0.030	0.0120	0.50
1499:	44	14	30	43	14	29	238042.5150	0.0117	0.030	0.0117	0.50
1500:	44	14	31	43	14	30	238042.5150	0.0117	0.030	0.0117	0.50
1501:	45	14	31	44	14	30	243432.9440	0.0185	0.030	0.0186	0.50
1502:	45	14	32	44	14	31	243432.9440	0.0185	0.030	0.0186	0.50
1503:	46	14	32	45	14	31	248822.0490	0.0203	0.030	0.0204	0.50
1504:	46	14	33	45	14	32	248822.0490	0.0203	0.030	0.0204	0.50
1505:	47	14	33	46	14	32	254209.7960	0.0118	0.030	0.0118	0.50
1506:	47	14	34	46	14	33	254209.7960	0.0118	0.030	0.0118	0.50
1507:	48	14	34	47	14	33	259596.1710	0.0075	0.030	0.0075	0.50
1508:	48	14	35	47	14	34	259596.1710	0.0075	0.030	0.0075	0.50
1509:	49	14	35	48	14	34	264981.1370	-0.0008	0.030	-0.0009	0.50
1510:	49	14	36	48	14	35	264981.1370	-0.0008	0.030	-0.0009	0.50
1511:	50	14	36	49	14	35	270364.6900	0.0111	0.030	0.0112	0.50
1512:	50	14	37	49	14	36	270364.6900	0.0111	0.030	0.0112	0.50
1513:	51	14	37	50	14	36	275746.7460	-0.0118	0.030	-0.0118	0.50
1514:	51	14	38	50	14	37	275746.7460	-0.0118	0.030	-0.0118	0.50
1515:	52	14	38	51	14	37	281127.3440	-0.0024	0.030	-0.0025	0.50

1516:	52	14	39	51	14	38	281127.3440	-0.0024	0.030	-0.0025	0.50
1517:	53	14	39	52	14	38	286506.4090	-0.0073	0.030	-0.0073	0.50
1518:	53	14	40	52	14	39	286506.4090	-0.0073	0.030	-0.0073	0.50
1519:	54	14	40	53	14	39	291883.9320	-0.0071	0.030	-0.0072	0.50
1520:	54	14	41	53	14	40	291883.9320	-0.0071	0.030	-0.0072	0.50
1521:	55	14	41	54	14	40	297259.8810	-0.0056	0.030	-0.0056	0.50
1522:	55	14	42	54	14	41	297259.8810	-0.0056	0.030	-0.0056	0.50
1523:	56	14	42	55	14	41	302634.2060	-0.0246	0.030	-0.0246	0.50
1524:	56	14	43	55	14	42	302634.2060	-0.0246	0.030	-0.0246	0.50
1525:	57	14	43	56	14	42	308006.9920	0.0490	0.030	0.0490	0.50
1526:	57	14	44	56	14	43	308006.9920	0.0490	0.030	0.0490	0.50
1527:	58	14	44	57	14	43	313377.9680	-0.0276	0.030	-0.0277	0.50
1528:	58	14	45	57	14	44	313377.9680	-0.0276	0.030	-0.0277	0.50
1529:	59	14	45	58	14	44	318747.3820	0.0212	0.030	0.0213	0.50
1530:	59	14	46	58	14	45	318747.3820	0.0212	0.030	0.0213	0.50
1531:	60	14	46	59	14	45	324114.9890	-0.0212	0.030	-0.0213	0.50
1532:	60	14	47	59	14	46	324114.9890	-0.0212	0.030	-0.0213	0.50
1533:	61	14	47	60	14	46	329480.8940	-0.0225	0.030	-0.0225	0.50
1534:	61	14	48	60	14	47	329480.8940	-0.0225	0.030	-0.0225	0.50
1535:	28	15	13	27	15	12	151807.7790	0.0292	0.030	0.0293	0.50
1536:	28	15	14	27	15	13	151807.7790	0.0292	0.030	0.0293	0.50
1537:	29	15	14	28	15	13	157221.0040	0.0199	0.030	0.0199	0.50
1538:	29	15	15	28	15	14	157221.0040	0.0199	0.030	0.0199	0.50
1539:	31	15	16	30	15	15	168044.7940	0.0405	0.030	0.0406	0.50
1540:	31	15	17	30	15	16	168044.7940	0.0405	0.030	0.0406	0.50
1541:	32	15	17	31	15	16	173455.2490	0.0212	0.030	0.0212	0.50
1542:	32	15	18	31	15	17	173455.2490	0.0212	0.030	0.0212	0.50
1543:	33	15	18	32	15	17	178864.7500	0.0284	0.030	0.0284	0.50
1544:	33	15	19	32	15	18	178864.7500	0.0284	0.030	0.0284	0.50
1545:	34	15	19	33	15	18	184273.2470	0.0424	0.030	0.0424	0.50
1546:	34	15	20	33	15	19	184273.2470	0.0424	0.030	0.0424	0.50
1547:	35	15	20	34	15	19	189680.6850	0.0383	0.030	0.0384	0.50
1548:	35	15	21	34	15	20	189680.6850	0.0383	0.030	0.0384	0.50
1549:	36	15	21	35	15	20	195087.0580	0.0403	0.030	0.0403	0.50
1550:	36	15	22	35	15	21	195087.0580	0.0403	0.030	0.0403	0.50
1551:	37	15	22	36	15	21	200492.3320	0.0444	0.030	0.0444	0.50
1552:	37	15	23	36	15	22	200492.3320	0.0444	0.030	0.0444	0.50
1553:	38	15	23	37	15	22	205896.4800	0.0537	0.030	0.0537	0.50
1554:	38	15	24	37	15	23	205896.4800	0.0537	0.030	0.0537	0.50
1555:	39	15	24	38	15	23	211299.4430	0.0390	0.030	0.0391	0.50
1556:	39	15	25	38	15	24	211299.4430	0.0390	0.030	0.0391	0.50
1557:	42	15	27	41	15	26	227501.1110	0.0398	0.030	0.0399	0.50
1558:	42	15	28	41	15	27	227501.1110	0.0398	0.030	0.0399	0.50
1559:	43	15	28	42	15	27	232899.1380	0.0323	0.030	0.0324	0.50
1560:	43	15	29	42	15	28	232899.1380	0.0323	0.030	0.0324	0.50
1561:	44	15	29	43	15	28	238295.8450	0.0150	0.030	0.0150	0.50
1562:	44	15	30	43	15	29	238295.8450	0.0150	0.030	0.0150	0.50
1563:	45	15	30	44	15	29	243691.2380	0.0234	0.030	0.0235	0.50
1564:	45	15	31	44	15	30	243691.2380	0.0234	0.030	0.0235	0.50
1565:	46	15	31	45	15	30	249085.2490	0.0192	0.030	0.0193	0.50
1566:	46	15	32	45	15	31	249085.2490	0.0192	0.030	0.0193	0.50
1567:	47	15	32	46	15	31	254477.8640	0.0178	0.030	0.0179	0.50
1568:	47	15	33	46	15	32	254477.8640	0.0178	0.030	0.0179	0.50
1569:	48	15	33	47	15	32	259869.0520	0.0177	0.030	0.0178	0.50
1570:	48	15	34	47	15	33	259869.0520	0.0177	0.030	0.0178	0.50
1571:	49	15	34	48	15	33	265258.7790	0.0143	0.030	0.0143	0.50
1572:	49	15	35	48	15	34	265258.7790	0.0143	0.030	0.0143	0.50
1573:	50	15	35	49	15	34	270647.0250	0.0167	0.030	0.0168	0.50
1574:	50	15	36	49	15	35	270647.0250	0.0167	0.030	0.0168	0.50
1575:	51	15	36	50	15	35	276033.7350	-0.0007	0.030	-0.0007	0.50
1576:	51	15	37	50	15	36	276033.7350	-0.0007	0.030	-0.0007	0.50

1577:	52	15	37	51	15	36	281418.9410	0.0231	0.030	0.0231	0.50
1578:	52	15	38	51	15	37	281418.9410	0.0231	0.030	0.0231	0.50
1579:	53	15	38	52	15	37	286802.5420	0.0162	0.030	0.0162	0.50
1580:	53	15	39	52	15	38	286802.5420	0.0162	0.030	0.0162	0.50
1581:	54	15	39	53	15	38	292184.5310	0.0006	0.030	0.0006	0.50
1582:	54	15	40	53	15	39	292184.5310	0.0006	0.030	0.0006	0.50
1583:	55	15	40	54	15	39	297564.9050	0.0021	0.030	0.0022	0.50
1584:	55	15	41	54	15	40	297564.9050	0.0021	0.030	0.0022	0.50
1585:	56	15	41	55	15	40	302943.6270	0.0126	0.030	0.0127	0.50
1586:	56	15	42	55	15	41	302943.6270	0.0126	0.030	0.0127	0.50
1587:	57	15	42	56	15	41	308320.6080	-0.0281	0.030	-0.0282	0.50
1588:	57	15	43	56	15	42	308320.6080	-0.0281	0.030	-0.0282	0.50
1589:	58	15	43	57	15	42	313695.9350	-0.0046	0.030	-0.0047	0.50
1590:	58	15	44	57	15	43	313695.9350	-0.0046	0.030	-0.0047	0.50
1591:	59	15	44	58	15	43	319069.5180	0.0216	0.030	0.0216	0.50
1592:	59	15	45	58	15	44	319069.5180	0.0216	0.030	0.0216	0.50
1593:	60	15	45	59	15	44	324441.2770	-0.0008	0.030	-0.0008	0.50
1594:	60	15	46	59	15	45	324441.2770	-0.0008	0.030	-0.0008	0.50
1595:	61	15	46	60	15	45	329811.2470	-0.0086	0.030	-0.0086	0.50
1596:	61	15	47	60	15	46	329811.2470	-0.0086	0.030	-0.0086	0.50
! Margules+20											
1597:	30	0	30	29	1	29	153195.0700	0.0117	0.030		
1598:	31	0	31	30	1	30	158703.9600	0.0185	0.030		
1599:	32	0	32	31	1	31	164168.0760	0.0043	0.030		
1600:	33	0	33	32	1	32	169591.4140	-0.0285	0.030		
1601:	34	0	34	33	1	33	174977.9150	0.0178	0.030		
1602:	35	0	35	34	1	34	180331.0820	0.0046	0.030		
1603:	36	0	36	35	1	35	185654.3760	-0.0158	0.030		
1604:	37	0	37	36	1	36	190950.9760	-0.0213	0.030		
1605:	38	0	38	37	1	37	196223.7920	0.0007	0.030		
1606:	39	0	39	38	1	38	201475.4250	0.0124	0.030		
1607:	40	0	40	39	1	39	206708.2660	0.0170	0.030		
1608:	41	0	41	40	1	40	211924.4350	-0.0133	0.030		
1609:	42	0	42	41	1	41	217125.9370	0.0041	0.030		
1610:	44	0	44	43	1	43	227491.4150	0.0024	0.030		
1611:	45	0	45	44	1	44	232658.2720	0.0024	0.030		
1612:	46	0	46	45	1	45	237816.1620	-0.0064	0.030		
1613:	47	0	47	46	1	46	242966.1450	-0.0027	0.030		
1614:	48	0	48	47	1	47	248109.1230	0.0059	0.030		
1615:	49	0	49	48	1	48	253245.8650	-0.0056	0.030		
1616:	50	0	50	49	1	49	258377.0880	-0.0124	0.030		
1617:	51	0	51	50	1	50	263503.4140	0.0065	0.030		
1618:	52	0	52	51	1	51	268625.3120	-0.0009	0.030		
1619:	53	0	53	52	1	52	273743.2790	0.0114	0.030		
1620:	54	0	54	53	1	53	278857.6520	-0.0081	0.030		
1621:	55	0	55	54	1	54	283968.8370	0.0117	0.030		
1622:	56	0	56	55	1	55	289077.0420	-0.0084	0.030		
1623:	57	0	57	56	1	56	294182.6120	0.0303	0.030		
1624:	58	0	58	57	1	57	299285.6100	-0.0192	0.030		
1625:	59	0	59	58	1	58	304386.3590	-0.0131	0.030		
1626:	60	0	60	59	1	59	309484.9710	0.0086	0.030		
1627/	61	0	61	60	1	60	314581.4360	-0.0921	0.030		
1628:	62	0	62	61	1	61	319676.1930	0.0151	0.030		
1629:	63	0	63	62	1	62	324769.0090	0.0070	0.030		
1630:	64	0	64	63	1	63	329860.0750	-0.0009	0.030		
1631:	28	1	28	27	0	27	150191.0970	-0.0167	0.030		
1632:	29	1	29	28	0	28	154821.6400	-0.0245	0.030		
1633:	30	1	30	29	0	29	159501.9800	-0.0125	0.030		
1634:	31	1	31	30	0	30	164228.5640	-0.0033	0.030		
1635:	32	1	32	31	0	31	168997.6990	-0.0159	0.030		
1636:	33	1	33	32	0	32	173805.7290	-0.0067	0.030		

1637:	34	1	33	33	2	32	156842.6010	-0.0069	0.030
1638:	34	1	34	33	0	33	178648.9850	-0.0110	0.030
1639:	35	1	34	34	2	33	164041.9200	0.0059	0.030
1640:	35	1	35	34	0	34	183523.9780	-0.0175	0.030
1641:	36	1	35	35	2	34	171137.6150	-0.0020	0.030
1642:	36	1	36	35	0	35	188427.4110	-0.0042	0.030
1643:	37	1	36	36	2	35	178124.3420	0.0062	0.030
1644:	37	1	36	37	0	37	152202.5680	-0.0143	0.030
1645:	37	1	37	36	0	36	193356.1360	-0.0127	0.030
1646:	38	1	37	37	2	36	184998.3380	-0.0090	0.030
1647:	38	1	37	38	0	38	158210.0840	0.0057	0.030
1648:	38	1	38	37	0	37	198307.3120	-0.0072	0.030
1649:	39	1	38	38	2	37	191757.5870	0.0088	0.030
1650:	39	1	38	39	0	39	164193.7140	-0.0205	0.030
1651:	39	1	39	38	0	38	203278.3090	0.0223	0.030
1652:	40	1	39	39	2	38	198401.5520	0.0145	0.030
1653:	40	1	39	40	0	40	170146.0270	-0.0349	0.030
1654:	40	1	40	39	0	39	208266.6320	-0.0147	0.030
1655:	41	1	40	40	2	39	204931.1950	0.0003	0.030
1656:	41	1	40	41	0	41	176061.3740	0.0219	0.030
1657:	41	1	41	40	0	40	213270.2470	0.0230	0.030
1658:	42	1	41	41	2	40	211348.8320	0.0119	0.030
1659:	42	1	41	42	0	42	181935.5080	-0.0201	0.030
1660:	42	1	42	41	0	41	218287.0350	-0.0262	0.030
1661:	43	1	42	42	2	41	217657.8220	0.0252	0.030
1662:	44	1	43	44	0	44	193551.2940	0.0035	0.030
1663:	44	1	44	43	0	43	228353.6910	-0.0063	0.030
1664:	45	1	44	44	2	43	229967.6850	-0.0044	0.030
1665:	45	1	44	45	0	45	199291.1800	-0.0030	0.030
1666:	45	1	45	44	0	44	233400.5460	-0.0004	0.030
1667:	46	1	45	45	2	44	235979.1270	0.0045	0.030
1668:	46	1	45	46	0	46	204986.1650	-0.0075	0.030
1669:	46	1	46	45	0	45	238454.7250	-0.0000	0.030
1670:	47	1	46	46	2	45	241902.5680	0.0027	0.030
1671:	47	1	47	46	0	46	243515.1420	-0.0067	0.030
1672:	48	1	47	47	2	46	247744.0390	0.0003	0.030
1673:	48	1	47	48	0	48	216246.7340	0.0041	0.030
1674:	48	1	48	47	0	47	248580.8560	-0.0060	0.030
1675:	49	1	48	48	2	47	253509.6120	0.0117	0.030
1676:	49	1	49	48	0	48	253651.0120	-0.0133	0.030
1677:	50	1	49	49	2	48	259205.2250	-0.0073	0.030
1678:	50	1	50	49	0	49	258724.9360	0.0338	0.030
1679:	51	1	50	50	2	49	264836.7650	0.0127	0.030
1680:	51	1	51	50	0	50	263801.8370	-0.0101	0.030
1681:	52	1	51	51	2	50	270409.7420	-0.0022	0.030
1682:	52	1	51	52	0	52	238307.6060	-0.0325	0.030
1683:	52	1	52	51	0	51	268881.2970	0.0010	0.030
1684:	53	1	52	52	2	51	275929.5040	-0.0059	0.030
1685:	53	1	52	53	0	53	243740.8440	-0.0102	0.030
1686:	53	1	53	52	0	52	273962.7630	0.0076	0.030
1687:	54	1	53	53	2	52	281401.0320	-0.0034	0.030
1688:	54	1	53	54	0	54	249146.0970	0.0038	0.030
1689:	54	1	54	53	0	53	279045.7960	0.0016	0.030
1690:	55	1	54	54	2	53	286828.9710	-0.0011	0.030
1691:	55	1	54	55	0	55	254525.6360	-0.0034	0.030
1692:	55	1	55	54	0	54	284130.0500	0.0127	0.030
1693:	56	1	55	55	2	54	292217.6180	-0.0095	0.030
1694:	56	1	56	55	0	55	289215.1620	0.0059	0.030
1695:	57	1	56	56	2	55	297570.9530	-0.0136	0.030
1696:	57	1	56	57	0	57	265216.1700	-0.0014	0.030
1697:	57	1	57	56	0	56	294300.8920	0.0274	0.030

1698:	58	1	57	57	2	56	302892.6410	0.0225	0.030
1699:	58	1	57	58	0	58	270531.0790	0.0099	0.030
1700:	58	1	58	57	0	57	299386.9090	-0.0040	0.030
1701:	59	1	58	58	2	57	308185.9040	0.0157	0.030
1702:	59	1	58	59	0	59	275828.1010	0.0134	0.030
1703:	59	1	59	58	0	58	304473.1110	0.0273	0.030
1704:	60	1	59	59	2	58	313453.7820	0.0087	0.030
1705:	60	1	59	60	0	60	281108.8320	0.0110	0.030
1706:	60	1	60	59	0	59	309559.2150	0.0290	0.030
1707:	61	1	60	60	2	59	318699.0110	0.0302	0.030
1708:	61	1	61	60	0	60	314645.0390	-0.0143	0.030
1709:	62	1	61	61	2	60	323923.9570	0.0097	0.030
1710:	62	1	61	62	0	62	291627.1070	-0.0078	0.030
1711:	62	1	62	61	0	61	319730.5520	0.0118	0.030
1712:	63	1	62	62	2	61	329130.8540	-0.0042	0.030
1713:	63	1	63	62	0	62	324815.5440	0.0254	0.030
1714:	64	1	64	63	0	63	329899.8790	0.0030	0.030
1715:	12	2	10	11	1	11	155163.8200	0.0360	0.030
1716:	13	2	11	12	1	12	162651.3850	0.0064	0.030
1717:	14	2	12	13	1	13	170409.1490	-0.0082	0.030
1718:	15	2	13	14	1	14	178454.6600	0.0170	0.030
1719:	16	2	15	15	1	14	152141.9500	-0.0089	0.030
1720:	17	2	16	16	1	15	155637.7470	-0.0210	0.030
1721:	18	2	16	17	1	17	204480.1560	0.0281	0.030
1722:	18	2	17	17	1	16	159037.2070	0.0096	0.030
1723:	19	2	18	18	1	17	162345.6260	-0.0126	0.030
1724:	20	2	19	19	1	18	165569.1700	-0.0220	0.030
1725:	21	2	19	20	1	20	233617.6300	0.0159	0.030
1726:	21	2	20	20	1	19	168714.6910	-0.0174	0.030
1727:	22	2	21	21	1	20	171789.8140	-0.0085	0.030
1728:	23	2	21	22	1	22	254887.3580	0.0108	0.030
1729:	23	2	22	22	1	21	174802.9910	0.0185	0.030
1730:	24	2	23	23	1	22	177763.4100	0.0087	0.030
1731:	25	2	23	24	1	24	277661.5200	0.0237	0.030
1732:	25	2	24	24	1	23	180681.1270	-0.0101	0.030
1733:	26	2	25	25	1	24	183566.9520	0.0070	0.030
1734:	27	2	26	26	1	25	186432.2450	-0.0017	0.030
1735:	28	2	27	27	1	26	189289.0270	0.0199	0.030
1736:	29	2	28	28	1	27	192149.5540	-0.0272	0.030
1737:	30	2	29	29	1	28	195026.5380	0.0106	0.030
1738:	31	2	30	30	1	29	197932.3740	-0.0113	0.030
1739:	32	2	31	31	1	30	200879.4390	0.0079	0.030
1740:	33	2	32	32	1	31	203879.4360	0.0221	0.030
1741:	33	2	32	33	1	33	152275.7060	0.0195	0.030
1742:	34	2	33	33	1	32	206943.3070	0.0129	0.030
1743:	34	2	33	34	1	34	156444.6270	-0.0255	0.030
1744:	35	2	34	34	1	33	210081.0000	0.0076	0.030
1745:	35	2	34	35	1	35	160697.3800	-0.0140	0.030
1746:	36	2	35	36	1	36	165029.2600	0.0159	0.030
1747:	37	2	36	37	1	37	169435.4960	-0.0264	0.030
1748:	38	2	37	38	1	38	173911.5410	-0.0279	0.030
1749:	39	2	38	39	1	39	178452.7690	-0.0044	0.030
1750:	40	2	39	39	1	38	227127.5750	0.0570	0.030
1751:	40	2	39	40	1	40	183054.6160	0.0102	0.030
1752:	41	2	39	40	3	38	152516.2970	-0.0220	0.030
1753:	41	2	40	40	1	39	230836.7970	-0.0059	0.030
1754:	42	2	40	41	3	39	161339.4780	0.0061	0.030
1755:	42	2	41	41	1	40	234648.2940	0.0020	0.030
1756:	42	2	41	42	1	42	192422.5520	-0.0307	0.030
1757:	43	2	41	42	3	40	170131.2480	-0.0026	0.030
1758:	43	2	42	42	1	41	238560.1650	0.0027	0.030

1759:	43	2 42	43	1 43	197180.2640	-0.0199	0.030
1760:	44	2 42	43	3 41	178877.9380	-0.0184	0.030
1761:	44	2 43	43	1 42	242569.4940	-0.0016	0.030
1762:	44	2 43	44	1 44	201981.7430	-0.0201	0.030
1763:	45	2 43	44	3 42	187565.9850	-0.0042	0.030
1764:	45	2 44	44	1 43	246672.4750	0.0005	0.030
1765:	45	2 44	45	1 45	206823.2370	0.0184	0.030
1766:	46	2 44	45	3 43	196182.0270	0.0116	0.030
1767:	46	2 45	45	1 44	250864.5890	0.0086	0.030
1768:	46	2 45	46	1 46	211701.0180	-0.0203	0.030
1769:	47	2 45	46	3 44	204713.1640	0.0066	0.030
1770:	47	2 45	47	1 46	154377.2490	-0.0341	0.030
1771:	47	2 46	46	1 45	255140.7890	0.0045	0.030
1772:	48	2 46	47	3 45	213147.1580	-0.0387	0.030
1773:	48	2 46	48	1 47	160649.3800	-0.0459	0.030
1774:	48	2 47	47	1 46	259495.7300	0.0074	0.030
1775:	49	2 47	49	1 48	166993.0470	-0.0015	0.030
1776:	49	2 48	49	1 49	226519.5480	-0.0068	0.030
1777:	50	2 48	49	3 47	229679.6370	-0.0040	0.030
1778:	50	2 48	50	1 49	173387.9140	0.0118	0.030
1779:	50	2 49	49	1 48	268419.5720	-0.0036	0.030
1780:	50	2 49	50	1 50	231510.7130	-0.0064	0.030
1781:	51	2 49	50	3 48	237758.7470	-0.0037	0.030
1782:	51	2 49	51	1 50	179814.9740	-0.0167	0.030
1783:	51	2 50	50	1 49	272977.3650	-0.0026	0.030
1784:	51	2 50	51	1 51	236523.2080	0.0007	0.030
1785:	52	2 50	51	3 49	245702.5220	0.0071	0.030
1786:	52	2 50	52	1 51	186256.8170	-0.0157	0.030
1787:	52	2 51	51	1 50	277591.8400	-0.0036	0.030
1788:	53	2 51	52	3 50	253504.9010	0.0238	0.030
1789:	53	2 51	53	1 52	192697.6470	-0.0187	0.030
1790:	53	2 52	52	1 51	282257.8460	0.0114	0.030
1791:	53	2 52	53	1 53	246602.7120	-0.0057	0.030
1792:	54	2 52	53	3 51	261161.3890	-0.0107	0.030
1793:	54	2 52	54	1 53	199123.5900	0.0006	0.030
1794:	54	2 53	53	1 52	286970.4420	0.0093	0.030
1795:	54	2 53	54	1 54	251665.4940	0.0014	0.030
1796:	55	2 53	54	3 52	268669.2980	0.0079	0.030
1797:	55	2 53	55	1 54	205522.6490	0.0051	0.030
1798:	55	2 54	54	1 53	291725.0140	-0.0092	0.030
1799:	55	2 54	55	1 55	256741.1040	0.0248	0.030
1800:	56	2 54	55	3 53	276027.3700	-0.0076	0.030
1801:	56	2 54	56	1 55	211884.8140	-0.0116	0.030
1802:	56	2 55	55	1 54	296517.3060	0.0029	0.030
1803:	56	2 55	56	1 56	261827.8560	0.0695	0.030
1804:	57	2 55	56	3 54	283236.0550	0.0122	0.030
1805:	57	2 55	57	1 56	218202.0630	0.0175	0.030
1806:	57	2 56	56	1 55	301343.3050	0.0168	0.030
1807:	57	2 56	57	1 57	266924.1090	0.0291	0.030
1808:	58	2 57	57	1 56	306199.3170	0.0038	0.030
1809:	58	2 57	58	1 58	272028.5820	0.0104	0.030
1810:	59	2 57	58	3 56	297213.6830	0.0151	0.030
1811:	59	2 57	59	1 58	230678.2090	-0.0056	0.030
1812:	59	2 58	58	1 57	311082.0080	-0.0165	0.030
1813:	59	2 58	59	1 59	277140.0080	-0.0019	0.030
1814:	60	2 58	59	3 57	303989.9770	0.0110	0.030
1815:	60	2 58	60	1 59	236829.5250	-0.0030	0.030
1816:	60	2 59	59	1 58	315988.3840	0.0150	0.030
1817:	61	2 59	60	3 58	310631.1210	-0.0419	0.030
1818:	61	2 59	61	1 60	242920.2550	-0.0075	0.030
1819:	61	2 60	60	1 59	320915.5610	-0.0168	0.030

1820:	61	2	60	61	1	61	287379.3640	0.0185	0.030
1821:	62	2	60	61	3	59	317143.1750	0.0034	0.030
1822:	62	2	60	62	1	61	248949.8510	-0.0063	0.030
1823:	62	2	61	61	1	60	325861.1800	0.0290	0.030
1824:	62	2	61	62	1	62	292505.3230	-0.0109	0.030
1825:	63	2	61	62	3	60	323532.4570	-0.0101	0.030
1826:	63	2	61	63	1	62	254918.7160	0.0019	0.030
1827:	64	2	62	63	3	61	329805.9050	-0.0083	0.030
1828:	64	2	62	64	1	63	260827.9940	-0.0212	0.030
1829:	65	2	63	65	1	64	266679.5470	-0.0084	0.030
1830:	66	2	64	66	1	65	272475.5870	-0.0027	0.030
1831:	67	2	65	67	1	66	278218.7010	0.0001	0.030
1832:	69	2	67	69	1	68	289557.4660	0.0088	0.030
1833:	70	2	68	70	1	69	295158.9460	-0.0285	0.030
1834:	71	2	69	71	1	70	300719.1680	-0.0058	0.030
1835:	72	2	70	72	1	71	306240.9790	0.0538	0.030
1836:	13	3	10	12	2	11	204980.2000	0.0512	0.030
1837:	14	3	12	13	2	11	208198.4000	0.0331	0.030
1838:	15	3	12	14	2	13	216248.9490	0.0275	0.030
1839:	16	3	14	15	2	13	217828.2000	0.0231	0.030
1840:	17	3	14	16	2	15	227777.4910	0.0297	0.030
1841:	18	3	15	17	2	16	233664.7830	0.0391	0.030
1842:	18	3	16	17	2	15	226964.1450	0.0066	0.030
1843:	19	3	16	18	2	17	239649.6120	0.0659	0.030
1844:	19	3	17	18	2	16	231321.3500	0.0044	0.030
1845:	20	3	17	19	2	18	245744.7200	0.0167	0.030
1846:	20	3	18	19	2	17	235527.1530	0.0054	0.030
1847:	21	3	18	20	2	19	251964.0450	0.0222	0.030
1848:	21	3	19	20	2	18	239575.4910	-0.0030	0.030
1849:	22	3	19	21	2	20	258322.2750	0.0009	0.030
1850:	22	3	20	21	2	19	243462.1670	-0.0086	0.030
1851:	23	3	20	22	2	21	264835.1780	0.0205	0.030
1852:	23	3	21	22	2	20	247184.8470	-0.0037	0.030
1853:	24	3	21	23	2	22	271519.2630	0.0159	0.030
1854:	24	3	22	23	2	21	250742.9940	-0.0011	0.030
1855:	25	3	22	24	2	23	278391.9280	0.0252	0.030
1856:	25	3	23	24	2	22	254137.7730	-0.0171	0.030
1857:	26	3	23	25	2	24	285471.1650	0.0180	0.030
1858:	26	3	24	25	2	23	257371.9340	-0.0333	0.030
1859:	27	3	24	26	2	25	292775.4770	-0.0262	0.030
1860:	27	3	25	26	2	24	260449.6120	-0.0167	0.030
1861:	28	3	26	27	2	25	263376.0430	-0.0179	0.030
1862:	29	3	26	28	2	27	308134.8800	-0.0199	0.030
1863:	29	3	27	28	2	26	266157.5460	-0.0113	0.030
1864:	30	3	28	29	2	27	268801.2530	-0.0072	0.030
1865:	31	3	28	30	2	29	324619.6680	-0.0177	0.030
1866:	31	3	29	31	2	30	150704.8490	0.0101	0.030
1867:	32	3	30	31	2	29	273707.3140	-0.0155	0.030
1868:	32	3	30	32	2	31	152548.0140	0.0175	0.030
1869:	33	3	31	32	2	30	275987.1770	0.0072	0.030
1870:	33	3	31	33	2	32	154516.4560	0.0246	0.030
1871:	34	3	32	33	2	31	278164.0400	0.0036	0.030
1872:	34	3	32	34	2	33	156611.5210	-0.0343	0.030
1873:	35	3	33	34	2	32	280247.9000	0.0296	0.030
1874:	35	3	33	35	2	34	158834.3320	-0.0173	0.030
1875:	36	3	34	35	2	33	282249.0630	0.0109	0.030
1876:	36	3	34	36	2	35	161185.3300	-0.0302	0.030
1877:	37	3	35	36	2	34	284178.3990	0.0018	0.030
1878:	37	3	35	37	2	36	163664.6970	-0.0035	0.030
1879:	38	3	36	37	2	35	286047.1280	-0.0290	0.030
1880:	38	3	36	38	2	37	166272.0340	-0.0181	0.030

1881:	39	3	37	38	2	36	287867.0080	-0.0101	0.030
1882:	39	3	37	39	2	38	169006.6680	-0.0037	0.030
1883:	40	3	38	39	2	37	289650.0880	-0.0052	0.030
1884:	40	3	38	40	2	39	171867.3940	-0.0070	0.030
1885:	41	3	39	40	2	38	291408.8830	-0.0174	0.030
1886:	41	3	39	41	2	40	174852.6830	0.0040	0.030
1887:	42	3	40	41	2	39	293156.3000	-0.0236	0.030
1888:	42	3	40	42	2	41	177960.5520	-0.0052	0.030
1889:	43	3	41	43	2	42	181188.7210	0.0017	0.030
1890:	44	3	42	43	2	41	296670.0020	0.0154	0.030
1891:	44	3	42	44	2	43	184534.4530	-0.0490	0.030
1892:	45	3	43	44	2	42	298463.1090	-0.0286	0.030
1893:	45	3	43	45	2	44	187994.9010	-0.0187	0.030
1894:	46	3	44	45	2	43	300298.4610	-0.0087	0.030
1895:	46	3	44	46	2	45	191566.6790	-0.0121	0.030
1896:	47	3	45	46	2	44	302189.2150	-0.0245	0.030
1897:	47	3	45	47	2	46	195246.2710	0.0031	0.030
1898:	48	3	46	47	2	45	304148.3280	0.0236	0.030
1899:	48	3	46	48	2	47	199029.8520	-0.0130	0.030
1900:	49	3	47	48	2	46	306187.9810	0.0630	0.030
1901:	49	3	47	49	2	48	202913.4530	-0.0405	0.030
1902:	50	3	48	49	2	47	308319.4610	-0.0583	0.030
1903:	50	3	48	50	2	49	206892.9750	-0.0172	0.030
1904:	51	3	48	50	4	47	155096.1470	-0.0043	0.030
1905:	51	3	49	50	2	48	310553.5530	0.0254	0.030
1906:	51	3	49	51	2	50	210964.0580	-0.0040	0.030
1907:	52	3	49	51	4	48	164834.2000	0.0058	0.030
1908:	52	3	50	51	2	49	312899.1520	0.0005	0.030
1909:	52	3	50	52	2	51	215122.2770	-0.0214	0.030
1910:	53	3	50	52	4	49	174618.2870	-0.0107	0.030
1911:	53	3	51	52	2	50	315364.2050	-0.0220	0.030
1912:	53	3	51	53	2	52	219363.2490	0.0238	0.030
1913:	54	3	51	53	4	50	184434.3580	0.0344	0.030
1914:	54	3	52	53	2	51	317955.0810	-0.0118	0.030
1915:	55	3	53	54	2	52	320676.5660	0.0565	0.030
1916:	55	3	53	55	2	54	228075.0470	-0.0286	0.030
1917:	56	3	53	55	4	52	204104.6130	0.0218	0.030
1918:	56	3	54	55	2	53	323531.6100	-0.0186	0.030
1919:	56	3	54	56	2	55	232536.9600	-0.0093	0.030
1920:	57	3	54	56	4	53	213929.6780	0.0027	0.030
1921:	57	3	54	57	2	55	151480.9560	0.0085	0.030
1922:	57	3	55	56	2	54	326522.0360	0.0231	0.030
1923:	58	3	56	57	2	55	329647.7130	0.0103	0.030
1924:	59	3	56	58	4	55	233486.2590	0.0044	0.030
1925:	59	3	56	59	2	57	162731.6510	0.0008	0.030
1926:	59	3	57	59	2	58	246293.3390	0.0036	0.030
1927:	60	3	57	59	4	56	243188.4110	-0.0091	0.030
1928:	60	3	57	60	2	58	168676.3560	0.0061	0.030
1929:	60	3	58	60	2	59	250988.0750	-0.0054	0.030
1930:	61	3	58	60	4	57	252820.5250	-0.0202	0.030
1931:	61	3	58	61	2	59	174805.4030	0.0249	0.030
1932:	61	3	59	61	2	60	255730.6240	-0.0089	0.030
1933:	62	3	59	61	4	58	262368.5140	-0.0272	0.030
1934:	62	3	59	62	2	60	181096.2890	0.0016	0.030
1935:	62	3	60	62	2	61	260517.1040	-0.0012	0.030
1936:	63	3	60	62	4	59	271818.7850	-0.0091	0.030
1937:	63	3	60	63	2	61	187526.2480	0.0122	0.030
1938:	64	3	61	63	4	60	281158.3070	-0.0162	0.030
1939:	64	3	62	64	2	63	270207.0770	0.0021	0.030
1940:	65	3	62	64	4	61	290374.9340	-0.0152	0.030
1941:	65	3	63	65	2	64	275103.6430	0.0023	0.030

1942:	66	3	63	65	4	62	299457.4230	-0.0393	0.030
1943:	66	3	63	66	2	64	207423.4730	0.0310	0.030
1944:	67	3	64	66	4	63	308395.8180	0.0329	0.030
1945:	67	3	64	67	2	65	214185.5280	-0.0442	0.030
1946:	67	3	65	67	2	66	284983.9740	0.0021	0.030
1947:	68	3	66	68	2	67	289961.9030	-0.0063	0.030
1948:	69	3	66	69	2	67	227784.6920	-0.0019	0.030
1949:	70	3	67	70	2	68	234586.8660	-0.0171	0.030
1950:	70	3	68	70	2	69	299980.1700	0.0206	0.030
1951:	72	3	69	72	2	70	248122.7080	-0.0219	0.030
1952:	73	3	70	73	2	71	254832.4780	-0.0202	0.030
1953:	73	3	71	73	2	72	315129.2900	0.0215	0.030
1954:	76	3	73	76	2	74	274625.0340	-0.0116	0.030
1955:	77	3	74	77	2	75	281091.5360	-0.0060	0.030
1956:	78	3	75	78	2	76	287486.9640	-0.0266	0.030
1957:	79	3	76	79	2	77	293810.0220	-0.0209	0.030
1958:	80	3	77	80	2	78	300060.4140	-0.0132	0.030
1959:	81	3	78	81	2	79	306238.8130	0.0343	0.030
1960:	17	4	14	16	3	13	279226.9040	-0.0273	0.030
1961:	18	4	14	17	3	15	284811.2240	0.0662	0.030
1962:	18	4	14	18	3	15	187490.3560	0.0750	0.030
1963:	18	4	15	17	3	14	284519.0430	-0.0505	0.030
1964:	18	4	15	18	3	16	187877.5500	-0.0335	0.030
1965:	19	4	15	18	3	16	290192.6370	0.0289	0.030
1966:	19	4	15	19	3	16	187333.5770	0.0294	0.030
1967:	19	4	16	19	3	17	187862.6330	-0.0188	0.030
1968:	20	4	16	19	3	17	295577.5400	0.0649	0.030
1969:	20	4	17	20	3	18	187849.4380	-0.0349	0.030
1970:	21	4	17	20	3	18	300967.9120	0.0187	0.030
1971:	21	4	17	21	3	18	186899.7690	0.0286	0.030
1972:	21	4	18	20	3	17	300209.5710	-0.0221	0.030
1973:	22	4	18	21	3	19	306366.5180	0.0223	0.030
1974:	22	4	18	22	3	19	186609.8170	0.0278	0.030
1975:	22	4	19	21	3	18	305357.4010	0.0304	0.030
1976:	22	4	19	22	3	20	187835.8620	-0.0277	0.030
1977:	23	4	19	22	3	20	311776.4900	0.0306	0.030
1978:	23	4	19	23	3	20	186261.6640	-0.0027	0.030
1979:	23	4	20	22	3	19	310451.9070	-0.0240	0.030
1980:	24	4	20	23	3	21	317201.5800	0.0310	0.030
1981:	24	4	20	24	3	21	185847.7090	0.0258	0.030
1982:	24	4	21	23	3	20	315484.9120	-0.0287	0.030
1983:	24	4	21	24	3	22	187855.3570	-0.0033	0.030
1984:	25	4	21	24	3	22	322646.1670	0.0065	0.030
1985:	25	4	21	25	3	22	185359.8100	0.0235	0.030
1986:	25	4	22	24	3	21	320447.3430	0.0031	0.030
1987:	25	4	22	25	3	23	187884.8070	-0.0157	0.030
1988:	26	4	22	25	3	23	328115.3840	0.0221	0.030
1989:	26	4	23	25	3	22	325329.3600	-0.0332	0.030
1990:	27	4	23	27	3	24	184129.0500	-0.0087	0.030
1991:	27	4	24	27	3	25	188000.8610	-0.0188	0.030
1992:	28	4	24	28	3	25	183369.6840	-0.0016	0.030
1993:	28	4	25	28	3	26	188095.5180	0.0044	0.030
1994:	29	4	25	29	3	26	182503.7920	0.0162	0.030
1995:	29	4	26	29	3	27	188220.3850	-0.0129	0.030
1996:	30	4	27	30	3	28	188380.2250	-0.0179	0.030
1997:	31	4	27	31	3	28	180424.8890	0.0063	0.030
1998:	31	4	28	31	3	29	188579.9860	0.0070	0.030
1999:	32	4	28	32	3	29	179200.9710	-0.0162	0.030
2000:	32	4	29	32	3	30	188824.7030	-0.0176	0.030
2001:	33	4	29	33	3	30	177849.3580	-0.0302	0.030
2002:	33	4	30	33	3	31	189119.7390	0.0112	0.030

2003:	34	4	30	34	3	31	176368.8960	-0.0164	0.030
2004:	34	4	31	34	3	32	189470.3340	-0.0300	0.030
2005:	35	4	31	35	3	32	174760.6410	0.0091	0.030
2006:	35	4	32	35	3	33	189882.0570	0.0026	0.030
2007:	36	4	32	36	3	33	173028.0620	-0.0284	0.030
2008:	36	4	33	36	3	34	190360.2040	-0.0372	0.030
2009:	37	4	33	37	3	34	171177.4390	-0.0265	0.030
2010:	37	4	34	37	3	35	190910.3350	-0.0070	0.030
2011:	38	4	34	38	3	35	169217.6320	-0.0215	0.030
2012:	38	4	35	38	3	36	191537.7000	-0.0049	0.030
2013:	39	4	35	39	3	36	167160.2720	-0.0028	0.030
2014:	39	4	36	39	3	37	192247.5790	0.0111	0.030
2015:	40	4	36	40	3	37	165019.6000	0.0021	0.030
2016:	40	4	37	40	3	38	193045.0140	-0.0032	0.030
2017:	41	4	37	41	3	38	162812.3780	-0.0102	0.030
2018:	41	4	38	41	3	39	193934.9470	-0.0026	0.030
2019:	42	4	38	42	3	39	160557.7000	0.0099	0.030
2020:	42	4	39	42	3	40	194922.0460	0.0103	0.030
2021:	43	4	39	43	3	40	158276.5470	-0.0031	0.030
2022:	43	4	40	43	3	41	196010.6690	-0.0170	0.030
2023:	44	4	40	44	3	41	155991.7080	0.0102	0.030
2024:	44	4	41	44	3	42	197205.0240	0.0035	0.030
2025:	45	4	41	45	3	42	153727.1530	-0.0391	0.030
2026:	45	4	42	45	3	43	198508.8330	-0.0073	0.030
2027:	46	4	42	46	3	43	151508.0380	-0.0102	0.030
2028:	47	4	44	47	3	45	201458.4030	0.0003	0.030
2029:	48	4	45	48	3	46	203109.9710	0.0228	0.030
2030:	49	4	46	49	3	47	204882.5320	-0.0200	0.030
2031:	50	4	47	50	3	48	206778.1260	0.0087	0.030
2032:	51	4	48	51	3	49	208798.1740	0.0447	0.030
2033:	52	4	49	52	3	50	210943.6650	0.0140	0.030
2034:	53	4	50	53	3	51	213215.3410	0.0193	0.030
2035:	54	4	51	54	3	52	215613.3420	-0.0160	0.030
2036:	55	4	52	55	3	53	218137.5480	-0.0113	0.030
2037:	58	4	55	58	3	56	226459.0700	0.0065	0.030
2038:	59	4	56	59	3	57	229477.9010	0.0052	0.030
2039:	60	4	57	60	3	58	232616.0210	0.0252	0.030
2040:	61	4	58	61	3	59	235870.9300	0.0123	0.030
2041:	62	4	58	61	5	57	155983.0320	0.0149	0.030
2042:	64	4	60	63	5	59	176184.9030	-0.0017	0.030
2043:	64	4	61	64	3	62	246307.7170	0.0124	0.030
2044:	65	4	62	65	3	63	249999.7150	0.0141	0.030
2045:	66	4	62	66	3	63	150479.1090	0.0137	0.030
2046:	66	4	63	66	3	64	253792.2370	0.0310	0.030
2047:	67	4	63	67	3	64	153683.8340	0.0022	0.030
2048:	67	4	64	67	3	65	257681.3610	0.0285	0.030
2049:	68	4	64	67	5	63	217835.1210	-0.0290	0.030
2050:	68	4	64	68	3	65	157231.9260	0.0168	0.030
2051:	68	4	65	68	3	66	261663.0620	0.0095	0.030
2052:	69	4	65	69	3	66	161117.2900	0.0342	0.030
2053:	69	4	66	69	3	67	265733.2470	0.0200	0.030
2054:	70	4	66	70	3	67	165331.6900	-0.0262	0.030
2055:	70	4	67	70	3	68	269887.6590	0.0239	0.030
2056:	71	4	67	71	3	68	169865.0030	-0.0391	0.030
2057:	71	4	68	71	3	69	274122.0320	0.0298	0.030
2058:	72	4	68	72	3	69	174704.9300	0.0086	0.030
2059:	72	4	69	72	3	70	278432.0360	0.0081	0.030
2060:	73	4	69	73	3	70	179837.0350	-0.0146	0.030
2061:	73	4	70	73	3	71	282813.4400	0.0283	0.030
2062:	74	4	70	74	3	71	185245.2400	-0.0073	0.030
2063:	74	4	71	74	3	72	287261.9010	0.0231	0.030

2064:	75	4	71	75	3	72	190911.5800	-0.0409	0.030
2065:	75	4	72	75	3	73	291773.2200	0.0211	0.030
2066:	78	4	75	78	3	76	305643.2190	0.0597	0.030
2067:	25	5	20	25	4	21	241044.9200	0.0751	0.030
2068:	26	5	21	26	4	22	240952.5140	0.0796	0.030
2069:	27	5	22	27	4	23	240841.0250	0.0472	0.030
2070:	28	5	23	28	4	24	240707.9150	0.0433	0.030
2071:	28	5	24	28	4	25	240967.4930	-0.0254	0.030
2072:	29	5	24	29	4	25	240550.2410	0.0302	0.030
2073:	29	5	25	29	4	26	240890.2260	-0.0421	0.030
2074:	30	5	25	30	4	26	240364.8030	0.0426	0.030
2075:	30	5	26	30	4	27	240805.7070	-0.0252	0.030
2076:	31	5	27	31	4	28	240714.4080	-0.0351	0.030
2077:	32	5	27	32	4	28	239895.7480	0.0075	0.030
2078:	32	5	28	32	4	29	240617.1170	-0.0261	0.030
2079:	33	5	28	33	4	29	239603.8340	0.0188	0.030
2080:	33	5	29	33	4	30	240514.7800	-0.0228	0.030
2081:	34	5	30	34	4	31	240408.6170	-0.0201	0.030
2082:	35	5	31	35	4	32	240300.1050	-0.0154	0.030
2083:	36	5	31	36	4	32	238439.4090	0.0131	0.030
2084:	36	5	32	36	4	33	240190.9910	-0.0076	0.030
2085:	37	5	32	37	4	33	237936.1350	0.0031	0.030
2086:	37	5	33	37	4	34	240083.2850	-0.0144	0.030
2087:	38	5	34	38	4	35	239979.3290	-0.0104	0.030
2088:	39	5	34	39	4	35	236718.5500	-0.0036	0.030
2089:	39	5	35	39	4	36	239881.7050	-0.0226	0.030
2090:	40	5	35	40	4	36	235990.2170	-0.0086	0.030
2091:	40	5	36	40	4	37	239793.3400	-0.0260	0.030
2092:	41	5	36	41	4	37	235172.4550	-0.0118	0.030
2093:	41	5	37	41	4	38	239717.4250	-0.0209	0.030
2094:	42	5	37	42	4	38	234257.8340	-0.0068	0.030
2095:	42	5	38	42	4	39	239657.4180	-0.0233	0.030
2096:	43	5	38	43	4	39	233238.9840	0.0064	0.030
2097:	43	5	39	43	4	40	239617.0750	-0.0222	0.030
2098:	44	5	39	44	4	40	232108.7400	-0.0122	0.030
2099:	44	5	40	44	4	41	239600.3890	-0.0260	0.030
2100:	45	5	40	45	4	41	230860.4720	-0.0227	0.030
2101:	45	5	41	45	4	42	239611.6120	-0.0222	0.030
2102:	46	5	41	46	4	42	229488.2280	0.0026	0.030
2103:	46	5	42	46	4	43	239655.1900	-0.0201	0.030
2104:	47	5	42	47	4	43	227986.9090	-0.0031	0.030
2105:	47	5	43	47	4	44	239735.7550	-0.0334	0.030
2106:	48	5	43	48	4	44	226352.7290	-0.0128	0.030
2107:	48	5	44	48	4	45	239858.1620	-0.0153	0.030
2108:	49	5	45	49	4	46	240027.3060	-0.0107	0.030
2109:	50	5	46	50	4	47	240248.2350	-0.0103	0.030
2110:	51	5	47	51	4	48	240526.0610	-0.0053	0.030
2111:	52	5	47	52	4	48	218468.8920	-0.0084	0.030
2112:	52	5	48	52	4	49	240865.8920	-0.0196	0.030
2113:	53	5	48	53	4	49	216174.2530	-0.0060	0.030
2114:	54	5	50	54	4	51	241752.1360	0.0068	0.030
2115:	55	5	51	55	4	52	242308.5650	-0.0173	0.030
2116:	56	5	52	56	4	53	242947.1430	-0.0066	0.030
2117:	57	5	52	57	4	53	205957.2670	0.0005	0.030
2118:	57	5	53	57	4	54	243672.5430	-0.0227	0.030
2119:	58	5	53	58	4	54	203216.7990	0.0167	0.030
2120:	58	5	54	58	4	55	244489.3800	-0.0017	0.030
2121:	59	5	54	59	4	55	200439.0430	0.0024	0.030
2122:	59	5	55	59	4	56	245401.9260	-0.0086	0.030
2123:	60	5	55	60	4	56	197646.0250	0.0072	0.030
2124:	60	5	56	60	4	57	246414.3200	0.0019	0.030

2125:	61	5	56	61	4	57	194861.1860	0.0238	0.030		
2126:	61	5	57	61	4	58	247530.2990	-0.0564	0.030		
2127:	62	5	57	62	4	58	192109.0450	-0.0209	0.030		
2128:	62	5	58	62	4	59	248753.5750	-0.0011	0.030		
2129:	63	5	58	63	4	59	189415.1060	-0.0133	0.030		
2130:	63	5	59	63	4	60	250087.1940	0.0004	0.030		
2131:	64	5	59	64	4	60	186805.1580	0.0005	0.030		
2132:	64	5	60	64	4	61	251534.0940	0.0074	0.030		
2133:	65	5	60	65	4	61	184305.1220	0.0121	0.030		
2134:	65	5	61	65	4	62	253096.7810	-0.0028	0.030		
2135:	66	5	61	66	4	62	181940.6730	0.0100	0.030		
2136:	66	5	62	66	4	63	254777.4660	0.0150	0.030		
2137:	67	5	62	67	4	63	179736.9640	0.0209	0.030		
2138:	67	5	63	67	4	64	256577.9680	0.0877	0.030		
2139:	68	5	63	68	4	64	177718.2530	0.0247	0.030		
2140:	68	5	64	68	4	65	258499.5190	0.0347	0.030		
2141:	69	5	64	69	4	65	175907.7340	0.0379	0.030		
2142:	69	5	65	69	4	66	260543.3150	0.0236	0.030		
2143:	71	5	66	71	4	67	172997.2080	0.0543	0.030		
2144:	72	5	67	72	4	68	171936.3370	0.0407	0.030		
2145:	72	5	68	72	4	69	267412.4860	0.0351	0.030		
2146:	73	5	68	73	4	69	171161.7660	0.0522	0.030		
2147:	73	5	69	73	4	70	269947.7190	0.0261	0.030		
2148:	74	5	69	74	4	70	170688.7530	0.0191	0.030		
2149:	74	5	70	74	4	71	272604.5900	0.0134	0.030		
2150:	75	5	70	75	4	71	170530.9350	0.0186	0.030		
2151:	75	5	71	75	4	72	275381.9260	0.0285	0.030		
2152:	76	5	71	76	4	72	170700.0720	0.0197	0.030		
2153:	76	5	72	76	4	73	278278.1510	0.0364	0.030		
2154:	77	5	72	77	4	73	171206.2230	0.0464	0.030		
2155:	77	5	73	77	4	74	281291.3970	0.0304	0.030		
2156:	78	5	73	78	4	74	172057.6140	0.0277	0.030		
2157:	79	5	74	79	4	75	173260.8770	0.0222	0.030		
2158:	81	5	76	81	4	77	176740.6670	-0.0097	0.030		
2159:	82	5	77	82	4	78	179021.7690	0.0009	0.030		
2160:	13	6	7	13	5	8	294376.7570	0.0073	0.030	0.0055	0.50
2161:	13	6	8	13	5	9	294376.7570	0.0036	0.030	0.0055	0.50
2162:	16	6	10	16	5	11	294450.9990	0.0013	0.030	-0.0138	0.50
2163:	16	6	11	16	5	12	294450.9990	-0.0289	0.030	-0.0138	0.50
2164:	17	6	11	17	5	12	294475.1610	0.0515	0.030	0.0240	0.50
2165:	17	6	12	17	5	13	294475.1610	-0.0036	0.030	0.0240	0.50
2166:	18	6	12	18	5	13	294498.3360	0.0506	0.030	0.0019	0.50
2167:	18	6	13	18	5	14	294498.3360	-0.0468	0.030	0.0019	0.50
2168:	19	6	13	19	5	14	294520.2760	0.1557	0.030	0.0725	0.50
2169:	19	6	14	19	5	15	294520.2760	-0.0107	0.030	0.0725	0.50
2170:	20	6	14	20	5	15	294540.3170	0.1329	0.030	-0.0054	0.50
2171:	20	6	15	20	5	16	294540.3170	-0.1437	0.030	-0.0054	0.50
2172:	21	6	15	21	5	16	294558.2750	0.2531	0.030	0.0291	0.50
2173:	21	6	16	21	5	17	294558.2750	-0.1948	0.030	0.0291	0.50
2174:	34	6	28	34	5	29	294321.3740	0.0649	0.030		
2175:	35	6	30	35	5	31	294306.3460	-0.0647	0.030		
2176:	36	6	30	36	5	31	294145.2200	0.0728	0.030		
2177:	36	6	31	36	5	32	294231.8500	-0.0544	0.030		
2178:	37	6	31	37	5	32	294034.5570	0.0642	0.030		
2179:	37	6	32	37	5	33	294147.3250	-0.0755	0.030		
2180:	38	6	32	38	5	33	293906.8490	0.0790	0.030		
2181/	38	6	33	38	5	34	294052.4940	-0.0946	0.030		
2182:	39	6	33	39	5	34	293760.3060	0.0312	0.030		
2183:	39	6	34	39	5	35	293947.1610	-0.0653	0.030		
2184:	40	6	34	40	5	35	293593.1590	0.0284	0.030		
2185:	40	6	35	40	5	36	293831.0730	-0.0785	0.030		

2186:	41	6	35	41	5	36	293403.3070	0.0382	0.030
2187:	41	6	36	41	5	37	293704.2440	-0.0505	0.030
2188:	42	6	36	42	5	37	293188.4510	0.0413	0.030
2189:	42	6	37	42	5	38	293566.6520	-0.0385	0.030
2190:	43	6	37	43	5	38	292946.0250	-0.0155	0.030
2191:	43	6	38	43	5	39	293418.4760	-0.0178	0.030
2192:	44	6	38	44	5	39	292673.3850	-0.0101	0.030
2193:	44	6	39	44	5	40	293259.9590	-0.0320	0.030
2194:	45	6	39	45	5	40	292367.4620	0.0302	0.030
2195:	45	6	40	45	5	41	293091.5930	-0.0221	0.030
2196:	46	6	40	46	5	41	292024.7910	-0.0216	0.030
2197:	46	6	41	46	5	42	292913.9420	-0.0173	0.030
2198:	47	6	41	47	5	42	291641.8900	0.0058	0.030
2199:	47	6	42	47	5	43	292727.7340	-0.0568	0.030
2200:	48	6	42	48	5	43	291214.6630	0.0039	0.030
2201:	48	6	43	48	5	44	292534.0650	0.0012	0.030
2202:	49	6	43	49	5	44	290738.7760	-0.0265	0.030
2203:	49	6	44	49	5	45	292333.8760	-0.0557	0.030
2204:	50	6	44	50	5	45	290209.6160	-0.0063	0.030
2205:	50	6	45	50	5	46	292128.6810	-0.0780	0.030
2206:	51	6	45	51	5	46	289622.0490	-0.0157	0.030
2207:	51	6	46	51	5	47	291920.1170	-0.0135	0.030
2208:	52	6	46	52	5	47	288970.6980	-0.0214	0.030
2209:	52	6	47	52	5	48	291709.8460	-0.0147	0.030
2210:	53	6	47	53	5	48	288249.8180	-0.0153	0.030
2211:	53	6	48	53	5	49	291499.9650	-0.0345	0.030
2212:	54	6	48	54	5	49	287453.3250	-0.0118	0.030
2213:	54	6	49	54	5	50	291292.7960	-0.0415	0.030
2214:	55	6	49	55	5	50	286574.8630	-0.0219	0.030
2215:	56	6	50	56	5	51	285607.8860	-0.0286	0.030
2216:	56	6	51	56	5	52	290896.9420	-0.0446	0.030
2217:	57	6	51	57	5	52	284545.6840	-0.0383	0.030
2218:	57	6	52	57	5	53	290714.0630	-0.0256	0.030
2219:	58	6	52	58	5	53	283381.5290	-0.0321	0.030
2220:	58	6	53	58	5	54	290545.4480	-0.0150	0.030
2221:	59	6	53	59	5	54	282108.7180	-0.0442	0.030
2222:	59	6	54	59	5	55	290394.5610	-0.0238	0.030
2223:	60	6	54	60	5	55	280720.8450	-0.0334	0.030
2224:	60	6	55	60	5	56	290265.1320	-0.0109	0.030
2225:	61	6	55	61	5	56	279211.8370	-0.0146	0.030
2226:	61	6	56	61	5	57	290161.0090	-0.0176	0.030
2227:	62	6	56	62	5	57	277576.1770	-0.0240	0.030
2228:	62	6	57	62	5	58	290086.2820	-0.0269	0.030
2229:	63	6	57	63	5	58	275809.1990	-0.0309	0.030
2230:	63	6	58	63	5	59	290045.2250	-0.0019	0.030
2231:	64	6	58	64	5	59	273907.2630	0.0171	0.030
2232:	64	6	59	64	5	60	290042.1600	-0.0009	0.030
2233:	65	6	59	65	5	60	271867.7790	-0.0083	0.030
2234:	65	6	60	65	5	61	290081.5880	-0.0219	0.030
2235:	66	6	60	66	5	61	269689.8610	0.0111	0.030
2236:	66	6	61	66	5	62	290168.1610	-0.0057	0.030
2237:	67	6	61	67	5	62	267374.0930	-0.0081	0.030
2238:	67	6	62	67	5	63	290306.4760	-0.0146	0.030
2239:	68	6	63	68	5	64	290501.2820	0.0026	0.030
2240:	69	6	63	69	5	64	262341.3490	0.0034	0.030
2241:	69	6	64	69	5	65	290757.2380	-0.0017	0.030
2242:	70	6	64	70	5	65	259635.6870	0.0496	0.030
2243:	71	6	65	71	5	66	256814.9340	0.0108	0.030
2244:	71	6	66	71	5	67	291471.3730	0.0018	0.030
2245:	72	6	66	72	5	67	253890.4570	0.0124	0.030
2246:	72	6	67	72	5	68	291938.7240	-0.0110	0.030

2247:	73	6	67	73	5	68	250875.7290	0.0397	0.030		
2248:	73	6	68	73	5	69	292485.6000	0.0024	0.030		
2249:	74	6	68	74	5	69	247786.3710	0.0599	0.030		
2250:	74	6	69	74	5	70	293116.2320	-0.0373	0.030		
2251:	75	6	69	75	5	70	244640.0750	0.0774	0.030		
2252:	75	6	70	75	5	71	293834.8810	-0.0156	0.030		
2253:	76	6	71	76	5	72	294645.4300	-0.0061	0.030		
2254:	77	6	71	77	5	72	238256.4290	0.0683	0.030		
2255:	77	6	72	77	5	73	295551.6340	0.0038	0.030		
2256:	78	6	73	78	5	74	296557.0090	0.0243	0.030		
2257:	79	6	74	79	5	75	297664.7750	0.0258	0.030		
2258:	80	6	74	80	5	75	228789.9500	0.0774	0.030		
2259:	81	6	76	81	5	77	300199.1180	0.0022	0.030		
2260:	28	16	12	27	16	11	151986.2800	0.0460	0.030	0.0460	0.50
2261:	28	16	13	27	16	12	151986.2800	0.0460	0.030	0.0460	0.50
2262:	29	16	13	28	16	12	157405.6220	0.0725	0.030	0.0725	0.50
2263:	29	16	14	28	16	13	157405.6220	0.0725	0.030	0.0725	0.50
2264:	30	16	14	29	16	13	162823.9720	0.0268	0.030	0.0268	0.50
2265:	30	16	15	29	16	14	162823.9720	0.0268	0.030	0.0268	0.50
2266:	31	16	15	30	16	14	168241.4330	0.0431	0.030	0.0431	0.50
2267:	31	16	16	30	16	15	168241.4330	0.0431	0.030	0.0431	0.50
2268:	32	16	16	31	16	15	173657.9280	0.0756	0.030	0.0756	0.50
2269:	32	16	17	31	16	16	173657.9280	0.0756	0.030	0.0756	0.50
2270:	33	16	17	32	16	16	179073.3660	0.0645	0.030	0.0645	0.50
2271:	33	16	18	32	16	17	179073.3660	0.0645	0.030	0.0645	0.50
2272:	34	16	18	33	16	17	184487.7640	0.0577	0.030	0.0578	0.50
2273:	34	16	19	33	16	18	184487.7640	0.0577	0.030	0.0578	0.50
2274:	35	16	19	34	16	18	189901.0790	0.0434	0.030	0.0435	0.50
2275:	35	16	20	34	16	19	189901.0790	0.0434	0.030	0.0435	0.50
2276:	36	16	20	35	16	19	195313.3010	0.0425	0.030	0.0425	0.50
2277:	36	16	21	35	16	20	195313.3010	0.0425	0.030	0.0425	0.50
2278:	37	16	21	36	16	20	200724.3890	0.0448	0.030	0.0449	0.50
2279:	37	16	22	36	16	21	200724.3890	0.0448	0.030	0.0449	0.50
2280:	38	16	22	37	16	21	206134.2830	0.0213	0.030	0.0213	0.50
2281:	38	16	23	37	16	22	206134.2830	0.0213	0.030	0.0213	0.50
2282:	39	16	23	38	16	22	211543.0030	0.0226	0.030	0.0226	0.50
2283:	39	16	24	38	16	23	211543.0030	0.0226	0.030	0.0226	0.50
2284:	40	16	24	39	16	23	216950.5360	0.0665	0.030	0.0666	0.50
2285:	40	16	25	39	16	24	216950.5360	0.0665	0.030	0.0666	0.50
2286:	44	16	28	43	16	27	238567.5500	0.0315	0.030	0.0316	0.50
2287:	44	16	29	43	16	28	238567.5500	0.0315	0.030	0.0316	0.50
2288:	45	16	29	44	16	28	243968.4400	0.0383	0.030	0.0384	0.50
2289:	45	16	30	44	16	29	243968.4400	0.0383	0.030	0.0384	0.50
2290:	46	16	30	45	16	29	249367.9090	0.0364	0.030	0.0365	0.50
2291:	46	16	31	45	16	30	249367.9090	0.0364	0.030	0.0365	0.50
2292:	47	16	31	46	16	30	254765.9340	0.0329	0.030	0.0329	0.50
2293:	47	16	32	46	16	31	254765.9340	0.0329	0.030	0.0329	0.50
2294:	48	16	32	47	16	31	260162.4900	0.0329	0.030	0.0329	0.50
2295:	48	16	33	47	16	32	260162.4900	0.0329	0.030	0.0329	0.50
2296:	49	16	33	48	16	32	265557.5580	0.0474	0.030	0.0474	0.50
2297:	49	16	34	48	16	33	265557.5580	0.0474	0.030	0.0474	0.50
2298:	50	16	34	49	16	33	270951.0510	0.0193	0.030	0.0193	0.50
2299:	50	16	35	49	16	34	270951.0510	0.0193	0.030	0.0193	0.50
2300:	51	16	35	50	16	34	276343.0200	0.0294	0.030	0.0294	0.50
2301:	51	16	36	50	16	35	276343.0200	0.0294	0.030	0.0294	0.50
2302:	52	16	36	51	16	35	281733.3700	0.0125	0.030	0.0125	0.50
2303:	52	16	37	51	16	36	281733.3700	0.0125	0.030	0.0125	0.50
2304:	53	16	37	52	16	36	287122.1200	0.0171	0.030	0.0171	0.50
2305:	53	16	38	52	16	37	287122.1200	0.0171	0.030	0.0171	0.50
2306:	54	16	38	53	16	37	292509.1980	0.0008	0.030	0.0009	0.50
2307:	54	16	39	53	16	38	292509.1980	0.0008	0.030	0.0009	0.50

2308:	55	16	39	54	16	38	297894.6230	0.0121	0.030	0.0121	0.50
2309:	55	16	40	54	16	39	297894.6230	0.0121	0.030	0.0121	0.50
2310:	56	16	40	55	16	39	303278.3230	0.0082	0.030	0.0083	0.50
2311:	56	16	41	55	16	40	303278.3230	0.0082	0.030	0.0083	0.50
2312:	57	16	41	56	16	40	308660.3030	0.0234	0.030	0.0234	0.50
2313:	57	16	42	56	16	41	308660.3030	0.0234	0.030	0.0234	0.50
2314:	58	16	42	57	16	41	314040.4640	-0.0122	0.030	-0.0122	0.50
2315:	58	16	43	57	16	42	314040.4640	-0.0122	0.030	-0.0122	0.50
2316:	59	16	43	58	16	42	319418.9040	0.0283	0.030	0.0283	0.50
2317:	59	16	44	58	16	43	319418.9040	0.0283	0.030	0.0283	0.50
2318:	60	16	44	59	16	43	324795.4290	-0.0201	0.030	-0.0201	0.50
2319:	60	16	45	59	16	44	324795.4290	-0.0201	0.030	-0.0201	0.50
2320:	28	17	11	27	17	10	152175.0050	0.0629	0.030	0.0629	0.50
2321:	28	17	12	27	17	11	152175.0050	0.0629	0.030	0.0629	0.50
2322:	29	17	12	28	17	11	157600.7770	0.0341	0.030	0.0342	0.50
2323:	29	17	13	28	17	12	157600.7770	0.0341	0.030	0.0342	0.50
2324:	30	17	13	29	17	12	163025.6800	0.0823	0.030	0.0824	0.50
2325:	30	17	14	29	17	13	163025.6800	0.0823	0.030	0.0824	0.50
2326:	31	17	14	30	17	13	168449.5170	0.0424	0.030	0.0424	0.50
2327:	31	17	15	30	17	14	168449.5170	0.0424	0.030	0.0424	0.50
2328:	32	17	15	31	17	14	173872.4170	0.0754	0.030	0.0754	0.50
2329:	32	17	16	31	17	15	173872.4170	0.0754	0.030	0.0754	0.50
2330:	33	17	16	32	17	15	179294.2260	0.0591	0.030	0.0591	0.50
2331:	33	17	17	32	17	16	179294.2260	0.0591	0.030	0.0591	0.50
2332:	34	17	17	33	17	16	184714.9640	0.0454	0.030	0.0455	0.50
2333:	34	17	18	33	17	17	184714.9640	0.0454	0.030	0.0455	0.50
2334:	35	17	18	34	17	17	190134.5980	0.0331	0.030	0.0332	0.50
2335:	35	17	19	34	17	18	190134.5980	0.0331	0.030	0.0332	0.50
2336:	36	17	19	35	17	18	195553.1260	0.0519	0.030	0.0519	0.50
2337:	36	17	20	35	17	19	195553.1260	0.0519	0.030	0.0519	0.50
2338:	37	17	20	36	17	19	200970.4660	0.0513	0.030	0.0513	0.50
2339:	37	17	21	36	17	20	200970.4660	0.0513	0.030	0.0513	0.50
2340:	38	17	21	37	17	20	206386.6290	0.0739	0.030	0.0739	0.50
2341:	38	17	22	37	17	21	206386.6290	0.0739	0.030	0.0739	0.50
2342:	39	17	22	38	17	21	211801.5320	0.0682	0.030	0.0682	0.50
2343:	39	17	23	38	17	22	211801.5320	0.0682	0.030	0.0682	0.50
2344:	40	17	23	39	17	22	217215.1800	0.0705	0.030	0.0705	0.50
2345:	40	17	24	39	17	23	217215.1800	0.0705	0.030	0.0705	0.50
2346:	44	17	27	43	17	26	238856.4750	0.0380	0.030	0.0380	0.50
2347:	44	17	28	43	17	27	238856.4750	0.0380	0.030	0.0380	0.50
2348:	45	17	28	44	17	27	244263.3540	0.0543	0.030	0.0543	0.50
2349:	45	17	29	44	17	28	244263.3540	0.0543	0.030	0.0543	0.50
2350:	46	17	29	45	17	28	249668.7510	0.0382	0.030	0.0382	0.50
2351:	46	17	30	45	17	29	249668.7510	0.0382	0.030	0.0382	0.50
2352:	47	17	30	46	17	29	255072.6850	0.0393	0.030	0.0394	0.50
2353:	47	17	31	46	17	30	255072.6850	0.0393	0.030	0.0394	0.50
2354:	48	17	31	47	17	30	260475.1090	0.0414	0.030	0.0414	0.50
2355:	48	17	32	47	17	31	260475.1090	0.0414	0.030	0.0414	0.50
2356:	49	17	32	48	17	31	265875.9750	0.0270	0.030	0.0270	0.50
2357:	49	17	33	48	17	32	265875.9750	0.0270	0.030	0.0270	0.50
2358:	50	17	33	49	17	32	271275.2910	0.0345	0.030	0.0346	0.50
2359:	50	17	34	49	17	33	271275.2910	0.0345	0.030	0.0346	0.50
2360:	51	17	34	50	17	33	276672.9990	0.0363	0.030	0.0364	0.50
2361:	51	17	35	50	17	34	276672.9990	0.0363	0.030	0.0364	0.50
2362:	52	17	35	51	17	34	282069.0690	0.0327	0.030	0.0328	0.50
2363:	52	17	36	51	17	35	282069.0690	0.0327	0.030	0.0328	0.50
2364:	53	17	36	52	17	35	287463.4770	0.0297	0.030	0.0298	0.50
2365:	53	17	37	52	17	36	287463.4770	0.0297	0.030	0.0298	0.50
2366:	54	17	37	53	17	36	292856.2070	0.0414	0.030	0.0415	0.50
2367:	54	17	38	53	17	37	292856.2070	0.0414	0.030	0.0415	0.50
2368:	55	17	38	54	17	37	298247.1670	0.0057	0.030	0.0057	0.50

2369:	55	17	39	54	17	38	298247.1670	0.0057	0.030	0.0057	0.50
2370:	56	17	39	55	17	38	303636.4120	0.0073	0.030	0.0073	0.50
2371:	56	17	40	55	17	39	303636.4120	0.0073	0.030	0.0073	0.50
2372:	58	17	41	57	17	40	314409.5410	0.0251	0.030	0.0251	0.50
2373:	58	17	42	57	17	41	314409.5410	0.0251	0.030	0.0251	0.50
2374:	59	17	42	58	17	41	319793.3830	0.0582	0.030	0.0582	0.50
2375:	59	17	43	58	17	42	319793.3830	0.0582	0.030	0.0582	0.50
2376:	60	17	43	59	17	42	325175.2510	-0.0123	0.030	-0.0124	0.50
2377:	60	17	44	59	17	43	325175.2510	-0.0123	0.030	-0.0124	0.50
2378:	28	18	10	27	18	9	152373.5060	0.0614	0.030	0.0614	0.50
2379:	28	18	11	27	18	10	152373.5060	0.0614	0.030	0.0614	0.50
2380:	29	18	11	28	18	10	157806.1440	0.0340	0.030	0.0340	0.50
2381:	29	18	12	28	18	11	157806.1440	0.0340	0.030	0.0340	0.50
2382:	30	18	12	29	18	11	163237.8400	0.0336	0.030	0.0337	0.50
2383:	30	18	13	29	18	12	163237.8400	0.0336	0.030	0.0337	0.50
2384:	31	18	13	30	18	12	168668.5390	0.0379	0.030	0.0380	0.50
2385:	31	18	14	30	18	13	168668.5390	0.0379	0.030	0.0380	0.50
2386:	32	18	14	31	18	13	174098.2450	0.0836	0.030	0.0837	0.50
2387:	32	18	15	31	18	14	174098.2450	0.0836	0.030	0.0837	0.50
2388:	33	18	15	32	18	14	179526.7900	0.0352	0.030	0.0352	0.50
2389:	33	18	16	32	18	15	179526.7900	0.0352	0.030	0.0352	0.50
2390:	34	18	16	33	18	15	184954.3000	0.0512	0.030	0.0513	0.50
2391:	34	18	17	33	18	16	184954.3000	0.0512	0.030	0.0513	0.50
2392:	35	18	17	34	18	16	190380.6810	0.0701	0.030	0.0701	0.50
2393:	35	18	18	34	18	17	190380.6810	0.0701	0.030	0.0701	0.50
2394:	36	18	18	35	18	17	195805.8630	0.0541	0.030	0.0542	0.50
2395:	36	18	19	35	18	18	195805.8630	0.0541	0.030	0.0542	0.50
2396:	37	18	19	36	18	18	201229.8540	0.0436	0.030	0.0437	0.50
2397:	37	18	20	36	18	19	201229.8540	0.0436	0.030	0.0437	0.50
2398:	38	18	20	37	18	19	206652.6490	0.0657	0.030	0.0658	0.50
2399:	38	18	21	37	18	20	206652.6490	0.0657	0.030	0.0658	0.50
2400:	39	18	21	38	18	20	212074.1760	0.0805	0.030	0.0805	0.50
2401:	39	18	22	38	18	21	212074.1760	0.0805	0.030	0.0805	0.50
2402:	40	18	22	39	18	21	217494.3890	0.0740	0.030	0.0740	0.50
2403:	40	18	23	39	18	22	217494.3890	0.0740	0.030	0.0740	0.50
2404:	44	18	26	43	18	25	239161.6750	0.0450	0.030	0.0451	0.50
2405:	44	18	27	43	18	26	239161.6750	0.0450	0.030	0.0451	0.50
2406:	45	18	27	44	18	26	244574.9500	0.0403	0.030	0.0404	0.50
2407:	45	18	28	44	18	27	244574.9500	0.0403	0.030	0.0404	0.50
2408:	46	18	28	45	18	27	249986.7530	0.0462	0.030	0.0462	0.50
2409:	46	18	29	45	18	28	249986.7530	0.0462	0.030	0.0462	0.50
2410:	47	18	29	46	18	28	255397.0200	0.0299	0.030	0.0300	0.50
2411:	47	18	30	46	18	29	255397.0200	0.0299	0.030	0.0300	0.50
2412:	48	18	30	47	18	29	260805.7870	0.0586	0.030	0.0587	0.50
2413:	48	18	31	47	18	30	260805.7870	0.0586	0.030	0.0587	0.50
2414:	49	18	31	48	18	30	266212.9200	0.0294	0.030	0.0294	0.50
2415:	49	18	32	48	18	31	266212.9200	0.0294	0.030	0.0294	0.50
2416:	50	18	32	49	18	31	271618.4650	0.0192	0.030	0.0192	0.50
2417:	50	18	33	49	18	32	271618.4650	0.0192	0.030	0.0192	0.50
2418:	51	18	33	50	18	32	277022.3800	0.0168	0.030	0.0168	0.50
2419:	51	18	34	50	18	33	277022.3800	0.0168	0.030	0.0168	0.50
2420:	52	18	34	51	18	33	282424.6390	0.0269	0.030	0.0269	0.50
2421:	52	18	35	51	18	34	282424.6390	0.0269	0.030	0.0269	0.50
2422:	53	18	35	52	18	34	287825.1850	0.0231	0.030	0.0231	0.50
2423:	53	18	36	52	18	35	287825.1850	0.0231	0.030	0.0231	0.50
2424:	54	18	36	53	18	35	293223.9760	-0.0061	0.030	-0.0061	0.50
2425:	54	18	37	53	18	36	293223.9760	-0.0061	0.030	-0.0061	0.50
2426:	55	18	37	54	18	36	298621.0390	-0.0035	0.030	-0.0035	0.50
2427:	55	18	38	54	18	37	298621.0390	-0.0035	0.030	-0.0035	0.50
2428:	56	18	38	55	18	37	304016.3080	-0.0048	0.030	-0.0048	0.50
2429:	56	18	39	55	18	38	304016.3080	-0.0048	0.030	-0.0048	0.50

2430:	57	18	39	56	18	38	309409.7410	-0.0220	0.030	-0.0221	0.50
2431:	57	18	40	56	18	39	309409.7410	-0.0220	0.030	-0.0221	0.50
2432:	58	18	40	57	18	39	314801.3750	0.0117	0.030	0.0118	0.50
2433:	58	18	41	57	18	40	314801.3750	0.0117	0.030	0.0118	0.50
2434:	59	18	41	58	18	40	320191.1080	0.0243	0.030	0.0244	0.50
2435:	59	18	42	58	18	41	320191.1080	0.0243	0.030	0.0244	0.50
2436:	60	18	42	59	18	41	325578.9120	0.0174	0.030	0.0175	0.50
2437:	60	18	43	59	18	42	325578.9120	0.0174	0.030	0.0175	0.50
2438:	28	19	9	27	19	8	152581.3650	0.0199	0.030	0.0200	0.50
2439:	28	19	10	27	19	9	152581.3650	0.0199	0.030	0.0200	0.50
2440:	29	19	10	28	19	9	158021.2600	0.0267	0.030	0.0267	0.50
2441:	29	19	11	28	19	10	158021.2600	0.0267	0.030	0.0267	0.50
2442:	30	19	11	29	19	10	163460.1750	0.0432	0.030	0.0433	0.50
2443:	30	19	12	29	19	11	163460.1750	0.0432	0.030	0.0433	0.50
2444:	31	19	12	30	19	11	168898.0490	0.0419	0.030	0.0419	0.50
2445:	31	19	13	30	19	12	168898.0490	0.0419	0.030	0.0419	0.50
2446:	32	19	13	31	19	12	174334.8410	0.0149	0.030	0.0149	0.50
2447:	32	19	14	31	19	13	174334.8410	0.0149	0.030	0.0149	0.50
2448:	33	19	14	32	19	13	179770.5960	0.0405	0.030	0.0406	0.50
2449:	33	19	15	32	19	14	179770.5960	0.0405	0.030	0.0406	0.50
2450:	34	19	15	33	19	14	185205.2110	0.0488	0.030	0.0488	0.50
2451:	34	19	16	33	19	15	185205.2110	0.0488	0.030	0.0488	0.50
2452:	36	19	17	35	19	16	196070.9070	0.0314	0.030	0.0315	0.50
2453:	36	19	18	35	19	17	196070.9070	0.0314	0.030	0.0315	0.50
2454:	37	19	18	36	19	17	201501.8300	-0.0864	0.030	-0.0865	0.50
2455:	37	19	19	36	19	18	201501.8300	-0.0864	0.030	-0.0865	0.50
2456:	38	19	19	37	19	18	206931.7670	0.0638	0.030	0.0638	0.50
2457:	38	19	20	37	19	19	206931.7670	0.0638	0.030	0.0638	0.50
2458:	39	19	20	38	19	19	212360.2290	0.0259	0.030	0.0260	0.50
2459:	39	19	21	38	19	20	212360.2290	0.0259	0.030	0.0260	0.50
2460:	40	19	21	39	19	20	217787.4010	0.0174	0.030	0.0175	0.50
2461:	40	19	22	39	19	21	217787.4010	0.0174	0.030	0.0175	0.50
2462:	44	19	25	43	19	24	239482.2940	0.0295	0.030	0.0295	0.50
2463:	44	19	26	43	19	25	239482.2940	0.0295	0.030	0.0295	0.50
2464:	45	19	26	44	19	25	244902.3780	0.0143	0.030	0.0143	0.50
2465:	45	19	27	44	19	26	244902.3780	0.0143	0.030	0.0143	0.50
2466:	46	19	27	45	19	26	250320.9640	0.0134	0.030	0.0135	0.50
2467:	46	19	28	45	19	27	250320.9640	0.0134	0.030	0.0135	0.50
2468:	47	19	28	46	19	27	255738.0180	0.0247	0.030	0.0248	0.50
2469:	47	19	29	46	19	28	255738.0180	0.0247	0.030	0.0248	0.50
2470:	48	19	29	47	19	28	261153.4820	0.0218	0.030	0.0218	0.50
2471:	48	19	30	47	19	29	261153.4820	0.0218	0.030	0.0218	0.50
2472:	49	19	30	48	19	29	266567.3420	0.0221	0.030	0.0221	0.50
2473:	49	19	31	48	19	30	266567.3420	0.0221	0.030	0.0221	0.50
2474:	50	19	31	49	19	30	271979.5600	0.0190	0.030	0.0191	0.50
2475:	50	19	32	49	19	31	271979.5600	0.0190	0.030	0.0191	0.50
2476:	51	19	32	50	19	31	277390.1150	0.0229	0.030	0.0229	0.50
2477:	51	19	33	50	19	32	277390.1150	0.0229	0.030	0.0229	0.50
2478:	52	19	33	51	19	32	282798.9660	0.0238	0.030	0.0238	0.50
2479:	52	19	34	51	19	33	282798.9660	0.0238	0.030	0.0238	0.50
2480:	53	19	34	52	19	33	288206.0660	0.0057	0.030	0.0057	0.50
2481:	53	19	35	52	19	34	288206.0660	0.0057	0.030	0.0057	0.50
2482:	54	19	35	53	19	34	293611.3960	-0.0195	0.030	-0.0195	0.50
2483:	54	19	36	53	19	35	293611.3960	-0.0195	0.030	-0.0195	0.50
2484:	55	19	36	54	19	35	299014.9640	-0.0132	0.030	-0.0132	0.50
2485:	55	19	37	54	19	36	299014.9640	-0.0132	0.030	-0.0132	0.50
2486:	56	19	37	55	19	36	304416.7490	0.0342	0.030	0.0343	0.50
2487:	56	19	38	55	19	37	304416.7490	0.0342	0.030	0.0343	0.50
2488:	57	19	38	56	19	37	309816.6140	0.0162	0.030	0.0163	0.50
2489:	57	19	39	56	19	38	309816.6140	0.0162	0.030	0.0163	0.50
2490:	58	19	39	57	19	38	315214.5960	0.0001	0.030	0.0001	0.50

2491:	58	19	40	57	19	39	315214.5960	0.0001	0.030	0.0001	0.50
2492:	59	19	40	58	19	39	320610.6780	-0.0011	0.030	-0.0011	0.50
2493:	59	19	41	58	19	40	320610.6780	-0.0011	0.030	-0.0011	0.50
2494:	60	19	41	59	19	40	326004.7930	-0.0244	0.030	-0.0244	0.50
2495:	60	19	42	59	19	41	326004.7930	-0.0244	0.030	-0.0244	0.50
2496:	28	20	8	27	20	7	152798.2560	-0.0148	0.030	-0.0148	0.50
2497:	28	20	9	27	20	8	152798.2560	-0.0148	0.030	-0.0148	0.50
2498:	29	20	9	28	20	8	158245.7130	-0.0085	0.030	-0.0085	0.50
2499:	29	20	10	28	20	9	158245.7130	-0.0085	0.030	-0.0085	0.50
2500:	31	20	11	30	20	10	169137.5520	-0.0106	0.030	-0.0106	0.50
2501:	31	20	12	30	20	11	169137.5520	-0.0106	0.030	-0.0106	0.50
2502:	32	20	12	31	20	11	174581.8950	0.0097	0.030	0.0097	0.50
2503:	32	20	13	31	20	12	174581.8950	0.0097	0.030	0.0097	0.50
2504:	34	20	14	33	20	13	185467.1800	0.0141	0.030	0.0141	0.50
2505:	34	20	15	33	20	14	185467.1800	0.0141	0.030	0.0141	0.50
2506:	36	20	16	35	20	15	196347.7390	0.0026	0.030	0.0026	0.50
2507:	36	20	17	35	20	16	196347.7390	0.0026	0.030	0.0026	0.50
2508:	37	20	17	36	20	16	201786.1880	0.0162	0.030	0.0163	0.50
2509:	37	20	18	36	20	17	201786.1880	0.0162	0.030	0.0163	0.50
2510:	38	20	18	37	20	17	207223.3260	-0.0034	0.030	-0.0034	0.50
2511:	38	20	19	37	20	18	207223.3260	-0.0034	0.030	-0.0034	0.50
2512:	39	20	19	38	20	18	212659.1730	-0.0032	0.030	-0.0033	0.50
2513:	39	20	20	38	20	19	212659.1730	-0.0032	0.030	-0.0033	0.50
2514:	40	20	20	39	20	19	218093.7080	0.0287	0.030	0.0287	0.50
2515:	40	20	21	39	20	20	218093.7080	0.0287	0.030	0.0287	0.50
2516:	44	20	24	43	20	23	239817.5930	-0.0025	0.030	-0.0025	0.50
2517:	44	20	25	43	20	24	239817.5930	-0.0025	0.030	-0.0025	0.50
2518:	45	20	25	44	20	24	245244.8750	-0.0124	0.030	-0.0125	0.50
2519:	45	20	26	44	20	25	245244.8750	-0.0124	0.030	-0.0125	0.50
2520:	46	20	26	45	20	25	250670.6350	-0.0046	0.030	-0.0047	0.50
2521:	46	20	27	45	20	26	250670.6350	-0.0046	0.030	-0.0047	0.50
2522:	47	20	27	46	20	26	256094.8050	-0.0150	0.030	-0.0150	0.50
2523:	47	20	28	46	20	27	256094.8050	-0.0150	0.030	-0.0150	0.50
2524:	48	20	28	47	20	27	261517.4090	0.0126	0.030	0.0127	0.50
2525:	48	20	29	47	20	28	261517.4090	0.0126	0.030	0.0127	0.50
2526:	49	20	29	48	20	28	266938.3230	-0.0137	0.030	-0.0137	0.50
2527:	49	20	30	48	20	29	266938.3230	-0.0137	0.030	-0.0137	0.50
2528:	50	20	30	49	20	29	272357.6140	0.0045	0.030	0.0046	0.50
2529:	50	20	31	49	20	30	272357.6140	0.0045	0.030	0.0046	0.50
2530:	51	20	31	50	20	30	277775.1840	0.0012	0.030	0.0013	0.50
2531:	51	20	32	50	20	31	277775.1840	0.0012	0.030	0.0013	0.50
2532:	52	20	32	51	20	31	283191.0340	0.0088	0.030	0.0089	0.50
2533:	52	20	33	51	20	32	283191.0340	0.0088	0.030	0.0089	0.50
2534:	53	20	33	52	20	32	288605.0960	-0.0093	0.030	-0.0093	0.50
2535:	53	20	34	52	20	33	288605.0960	-0.0093	0.030	-0.0093	0.50
2536:	54	20	34	53	20	33	294017.4100	0.0180	0.030	0.0180	0.50
2537:	54	20	35	53	20	34	294017.4100	0.0180	0.030	0.0180	0.50
2538:	55	20	35	54	20	34	299427.8700	0.0159	0.030	0.0159	0.50
2539:	55	20	36	54	20	35	299427.8700	0.0159	0.030	0.0159	0.50
2540:	56	20	36	55	20	35	304836.4240	-0.0366	0.030	-0.0367	0.50
2541:	56	20	37	55	20	36	304836.4240	-0.0366	0.030	-0.0367	0.50
2542:	58	20	38	57	20	37	315647.9570	-0.0275	0.030	-0.0276	0.50
2543:	58	20	39	57	20	38	315647.9570	-0.0275	0.030	-0.0276	0.50
2544:	59	20	39	58	20	38	321050.8290	-0.0118	0.030	-0.0118	0.50
2545:	59	20	40	58	20	39	321050.8290	-0.0118	0.030	-0.0118	0.50
2546:	60	20	40	59	20	39	326451.7000	-0.0194	0.030	-0.0195	0.50
2547:	60	20	41	59	20	40	326451.7000	-0.0194	0.030	-0.0195	0.50
2548:	34	21	13	33	21	12	185739.7700	-0.0268	0.030	-0.0269	0.50
2549:	34	21	14	33	21	13	185739.7700	-0.0268	0.030	-0.0269	0.50
2550:	36	21	15	35	21	14	196635.8380	-0.0507	0.030	-0.0507	0.50
2551:	36	21	16	35	21	15	196635.8380	-0.0507	0.030	-0.0507	0.50

2552:	37	21	16	36	21	15	202082.0170	-0.0359	0.030	-0.0359	0.50
2553:	37	21	17	36	21	16	202082.0170	-0.0359	0.030	-0.0359	0.50
2554:	38	21	17	37	21	16	207526.8920	-0.0256	0.030	-0.0256	0.50
2555:	38	21	18	37	21	17	207526.8920	-0.0256	0.030	-0.0256	0.50
2556:	39	21	18	38	21	17	212970.3800	-0.0692	0.030	-0.0692	0.50
2557:	39	21	19	38	21	18	212970.3800	-0.0692	0.030	-0.0692	0.50
2558:	40	21	19	39	21	18	218412.5750	-0.0391	0.030	-0.0391	0.50
2559:	40	21	20	39	21	19	218412.5750	-0.0391	0.030	-0.0391	0.50
2560:	44	21	23	43	21	22	240166.8910	-0.0496	0.030	-0.0496	0.50
2561:	44	21	24	43	21	23	240166.8910	-0.0496	0.030	-0.0496	0.50
2562:	45	21	24	44	21	23	245601.7340	-0.0395	0.030	-0.0396	0.50
2563:	45	21	25	44	21	24	245601.7340	-0.0395	0.030	-0.0396	0.50
2564:	46	21	25	45	21	24	251035.0010	-0.0402	0.030	-0.0403	0.50
2565:	46	21	26	45	21	25	251035.0010	-0.0402	0.030	-0.0403	0.50
2566:	47	21	26	46	21	25	256466.6840	-0.0271	0.030	-0.0271	0.50
2567:	47	21	27	46	21	26	256466.6840	-0.0271	0.030	-0.0271	0.50
2568:	48	21	27	47	21	26	261896.7150	-0.0356	0.030	-0.0356	0.50
2569:	48	21	28	47	21	27	261896.7150	-0.0356	0.030	-0.0356	0.50
2570:	49	21	28	48	21	27	267325.0810	-0.0465	0.030	-0.0465	0.50
2571:	49	21	29	48	21	28	267325.0810	-0.0465	0.030	-0.0465	0.50
2572:	50	21	29	49	21	28	272751.7830	-0.0265	0.030	-0.0265	0.50
2573:	50	21	30	49	21	29	272751.7830	-0.0265	0.030	-0.0265	0.50
2574:	51	21	30	50	21	29	278176.7270	-0.0376	0.030	-0.0376	0.50
2575:	51	21	31	50	21	30	278176.7270	-0.0376	0.030	-0.0376	0.50
2576:	52	21	31	51	21	30	283599.9100	-0.0509	0.030	-0.0510	0.50
2577:	52	21	32	51	21	31	283599.9100	-0.0509	0.030	-0.0510	0.50
2578:	54	21	33	53	21	32	294440.8950	-0.0554	0.030	-0.0555	0.50
2579:	54	21	34	53	21	33	294440.8950	-0.0554	0.030	-0.0555	0.50
2580:	55	21	34	54	21	33	299858.6550	-0.0256	0.030	-0.0256	0.50
2581:	55	21	35	54	21	34	299858.6550	-0.0256	0.030	-0.0256	0.50
2582:	58	21	37	57	21	36	316100.4250	-0.0133	0.030	-0.0133	0.50
2583:	58	21	38	57	21	37	316100.4250	-0.0133	0.030	-0.0133	0.50
2584:	59	21	38	58	21	37	321510.4530	0.0095	0.030	0.0095	0.50
2585:	59	21	39	58	21	38	321510.4530	0.0095	0.030	0.0095	0.50
2586:	60	21	39	59	21	38	326918.4270	-0.0135	0.030	-0.0136	0.50
2587:	60	21	40	59	21	39	326918.4270	-0.0135	0.030	-0.0136	0.50
2588:	36	22	14	35	22	13	196934.7700	-0.0843	0.030	-0.0843	0.50
2589:	36	22	15	35	22	14	196934.7700	-0.0843	0.030	-0.0843	0.50
2590:	39	22	17	38	22	16	213293.3990	-0.0879	0.030	-0.0880	0.50
2591:	39	22	18	38	22	17	213293.3990	-0.0879	0.030	-0.0880	0.50
2592:	40	22	18	39	22	17	218743.5510	-0.0823	0.030	-0.0824	0.50
2593:	40	22	19	39	22	18	218743.5510	-0.0823	0.030	-0.0824	0.50
2594:	43	22	21	42	22	20	235085.3240	-0.0813	0.030	-0.0814	0.50
2595:	43	22	22	42	22	21	235085.3240	-0.0813	0.030	-0.0814	0.50
2596:	44	22	22	43	22	21	240529.5920	-0.0696	0.030	-0.0697	0.50
2597:	44	22	23	43	22	22	240529.5920	-0.0696	0.030	-0.0697	0.50
2598:	45	22	23	44	22	22	245972.2910	-0.0707	0.030	-0.0707	0.50
2599:	45	22	24	44	22	23	245972.2910	-0.0707	0.030	-0.0707	0.50
2600:	46	22	24	45	22	23	251413.4080	-0.0644	0.030	-0.0644	0.50
2601:	46	22	25	45	22	24	251413.4080	-0.0644	0.030	-0.0644	0.50
2602:	47	22	25	46	22	24	256852.9070	-0.0537	0.030	-0.0538	0.50
2603:	47	22	26	46	22	25	256852.9070	-0.0537	0.030	-0.0538	0.50
2604:	48	22	26	47	22	25	262290.7470	-0.0468	0.030	-0.0469	0.50
2605:	48	22	27	47	22	26	262290.7470	-0.0468	0.030	-0.0469	0.50
2606:	49	22	27	48	22	26	267726.8810	-0.0579	0.030	-0.0580	0.50
2607:	49	22	28	48	22	27	267726.8810	-0.0579	0.030	-0.0580	0.50
2608:	50	22	28	49	22	27	273161.3040	-0.0595	0.030	-0.0595	0.50
2609:	50	22	29	49	22	28	273161.3040	-0.0595	0.030	-0.0595	0.50
2610:	51	22	29	50	22	28	278593.9850	-0.0501	0.030	-0.0501	0.50
2611:	51	22	30	50	22	29	278593.9850	-0.0501	0.030	-0.0501	0.50
2612:	52	22	30	51	22	29	284024.8870	-0.0344	0.030	-0.0345	0.50

2613:	52	22	31	51	22	30	284024.8870	-0.0344	0.030	-0.0345	0.50
2614:	53	22	31	52	22	30	289453.9570	-0.0334	0.030	-0.0335	0.50
2615:	53	22	32	52	22	31	289453.9570	-0.0334	0.030	-0.0335	0.50
2616:	54	22	32	53	22	31	294881.1670	-0.0432	0.030	-0.0433	0.50
2617:	54	22	33	53	22	32	294881.1670	-0.0432	0.030	-0.0433	0.50
2618:	55	22	33	54	22	32	300306.5170	-0.0320	0.030	-0.0321	0.50
2619:	55	22	34	54	22	33	300306.5170	-0.0320	0.030	-0.0321	0.50
2620:	56	22	34	55	22	33	305729.9500	-0.0253	0.030	-0.0253	0.50
2621:	56	22	35	55	22	34	305729.9500	-0.0253	0.030	-0.0253	0.50
2622:	57	22	35	56	22	34	311151.4770	0.0194	0.030	0.0194	0.50
2623:	57	22	36	56	22	35	311151.4770	0.0194	0.030	0.0194	0.50
2624:	58	22	36	57	22	35	316570.9420	-0.0226	0.030	-0.0226	0.50
2625:	58	22	37	57	22	36	316570.9420	-0.0226	0.030	-0.0226	0.50
2626:	59	22	37	58	22	36	321988.4700	0.0046	0.030	0.0046	0.50
2627:	59	22	38	58	22	37	321988.4700	0.0046	0.030	0.0046	0.50
2628:	60	22	38	59	22	37	327403.9430	0.0140	0.030	0.0140	0.50
2629:	60	22	39	59	22	38	327403.9430	0.0140	0.030	0.0140	0.50
2630/	43	23	20	42	23	19	235452.5800	-0.1165	0.030	-0.1165	0.50
2631:	43	23	21	42	23	20	235452.5800	-0.1165	0.030	-0.1165	0.50
2632/	44	23	21	43	23	20	240905.0580	-0.0909	0.030	-0.0910	0.50
2633:	44	23	22	43	23	21	240905.0580	-0.0909	0.030	-0.0910	0.50
2634/	45	23	22	44	23	21	246355.9310	-0.0915	0.030	-0.0915	0.50
2635:	45	23	23	44	23	22	246355.9310	-0.0915	0.030	-0.0915	0.50
2636:	47	23	24	46	23	23	257252.8250	-0.0736	0.030	-0.0737	0.50
2637:	47	23	25	46	23	24	257252.8250	-0.0736	0.030	-0.0737	0.50
2638:	48	23	25	47	23	24	262698.7730	-0.0616	0.030	-0.0616	0.50
2639:	48	23	26	47	23	25	262698.7730	-0.0616	0.030	-0.0616	0.50
2640:	49	23	26	48	23	25	268143.0090	-0.0492	0.030	-0.0492	0.50
2641:	49	23	27	48	23	26	268143.0090	-0.0492	0.030	-0.0492	0.50
2642:	50	23	27	49	23	26	273585.5070	-0.0296	0.030	-0.0296	0.50
2643:	50	23	28	49	23	27	273585.5070	-0.0296	0.030	-0.0296	0.50
2644:	52	23	29	51	23	28	284465.1360	0.0092	0.030	0.0092	0.50
2645:	52	23	30	51	23	29	284465.1360	0.0092	0.030	0.0092	0.50
2646:	54	23	31	53	23	30	295337.3690	0.0240	0.030	0.0241	0.50
2647:	54	23	32	53	23	31	295337.3690	0.0240	0.030	0.0241	0.50
2648:	55	23	32	54	23	31	300770.6190	0.0100	0.030	0.0100	0.50
2649:	55	23	33	54	23	32	300770.6190	0.0100	0.030	0.0100	0.50
2650:	57	23	34	56	23	33	311631.3250	0.0376	0.030	0.0377	0.50
2651:	57	23	35	56	23	34	311631.3250	0.0376	0.030	0.0377	0.50
2652:	58	23	35	57	23	34	317058.6660	0.0275	0.030	0.0275	0.50
2653:	58	23	36	57	23	35	317058.6660	0.0275	0.030	0.0275	0.50
2654:	59	23	36	58	23	35	322484.0050	0.0493	0.030	0.0493	0.50
2655:	59	23	37	58	23	36	322484.0050	0.0493	0.030	0.0493	0.50
2656:	60	23	37	59	23	36	327907.2910	0.0831	0.030	0.0832	0.50
2657:	60	23	38	59	23	37	327907.2910	0.0831	0.030	0.0832	0.50
2658:	43	24	19	42	24	18	235831.8370	-0.0348	0.030	-0.0349	0.50
2659:	43	24	20	42	24	19	235831.8370	-0.0348	0.030	-0.0349	0.50
2660:	44	24	20	43	24	19	241292.7820	-0.0257	0.030	-0.0257	0.50
2661:	44	24	21	43	24	20	241292.7820	-0.0257	0.030	-0.0257	0.50
2662:	47	24	23	46	24	22	257665.8990	0.0255	0.030	0.0255	0.50
2663:	47	24	24	46	24	23	257665.8990	0.0255	0.030	0.0255	0.50
2664:	48	24	24	47	24	23	263120.2330	0.0308	0.030	0.0309	0.50
2665:	48	24	25	47	24	24	263120.2330	0.0308	0.030	0.0309	0.50
2666:	49	24	25	48	24	24	268572.8340	0.0391	0.030	0.0391	0.50
2667:	49	24	26	48	24	25	268572.8340	0.0391	0.030	0.0391	0.50
2668:	50	24	26	49	24	25	274023.7010	0.0826	0.030	0.0827	0.50
2669:	50	24	27	49	24	26	274023.7010	0.0826	0.030	0.0827	0.50
2670:	51	24	27	50	24	26	279472.6920	0.0525	0.030	0.0525	0.50
2671:	51	24	28	50	24	27	279472.6920	0.0525	0.030	0.0525	0.50
2672:	52	24	28	51	24	27	284919.8910	0.0656	0.030	0.0657	0.50
2673:	52	24	29	51	24	28	284919.8910	0.0656	0.030	0.0657	0.50

2674:	53 24 29	52 24 28	290365.2100	0.0668	0.030	0.0669	0.50
2675:	53 24 30	52 24 29	290365.2100	0.0668	0.030	0.0669	0.50
2676:	54 24 30	53 24 29	295808.6050	0.0448	0.030	0.0448	0.50
2677:	54 24 31	53 24 30	295808.6050	0.0448	0.030	0.0448	0.50
2678:	55 24 31	54 24 30	301250.0970	0.0528	0.030	0.0528	0.50
2679:	55 24 32	54 24 31	301250.0970	0.0528	0.030	0.0528	0.50
2680/	56 24 32	55 24 31	306689.6750	0.1121	0.030	0.1122	0.50
2681:	56 24 33	55 24 32	306689.6750	0.1121	0.030	0.1122	0.50
2682:	58 24 34	57 24 33	317562.6000	0.0237	0.030	0.0237	0.50
2683:	58 24 35	57 24 34	317562.6000	0.0237	0.030	0.0237	0.50
2684:	73 2 71	73 1 72	311726.9710	-0.0253	0.030		
2685:	79 5 75	79 4 76	287660.1090	0.0706	0.030		
2686:	82 5 78	82 4 79	298028.0210	0.0340	0.030		

PARAMETERS IN FIT (values truncated and Nlines statistics):

10000	A	/MHz	29601.18220(86)	1
20000	B	/MHz	2812.149125(53)	2
30000	C	/MHz	2563.721998(47)	3
200	DJ	/kHz	1.538791(21)	4
1100	DJK	/kHz	-115.00852(53)	5
2000	DK	/kHz	2814.456(39)	6
40100	d1	/kHz	-0.3688083(68)	7
50000	d2	/kHz	-0.0091505(20)	8
300	HJ	/Hz	0.0061426(39)	9
1200	HJK	/Hz	-0.21744(17)	10
2100	HKJ	/Hz	-24.0662(30)	11
3000	HK	/Hz	834.52(68)	12
40200	h1	/Hz	0.0023411(18)	13
50100	h2	/Hz	0.00013843(81)	14
60000	h3	/Hz	0.00004192(17)	15
400	LJ	/mHz	-0.00003119(25)	16
1300	LJJK	/mHz	0.001430(17)	17
2200	LJK	/mHz	-0.03184(28)	18
3100	LKKJ	/mHz	10.200(11)	19
4000	LK	/mHz	-315.6(36)	20
40300	l1	/mHz	-0.00001437(15)	21
50200	l2	/mHz	-0.000001178(79)	22
60100	l3	/mHz	-0.000000704(31)	23
70000	l4	/mHz	-0.0000000988(70)	24
4100	PKKJ	/mHz	-0.003352(11)	25

MICROWAVE AVG = 0.001174 MHz, IR AVG = 0.00000
MICROWAVE RMS = 0.027037 MHz, IR RMS = 0.00000
END OF ITERATION 1 OLD, NEW RMS ERROR= 0.89597 0.89597

distinct frequency lines in fit: 2099
distinct parameters of fit: 25

		upper state	lower state	overall
limits of quantum number 1:	1	98	0 97	0 98
limits of quantum number 2:	0	24	0 24	0 24
limits of quantum number 3:	0	98	0 97	0 98

frequency range: 10750 529217

PARAMETERS IN FIT WITH STANDARD ERRORS ON THOSE THAT ARE FITTED:
(values rounded and degrees of freedom, Ndegf=Nlines-Nconst, statistics)

10000	A	/MHz	29601.18220(78)	1
20000	B	/MHz	2812.149125(48)	2
30000	C	/MHz	2563.721998(42)	3
200	DJ	/kHz	1.538791(19)	4
1100	DJK	/kHz	-115.00852(48)	5
2000	DK	/kHz	2814.456(35)	6
40100	d1	/kHz	-0.3688083(61)	7
50000	d2	/kHz	-0.0091506(18)	8
300	HJ	/Hz	0.0061426(35)	9
1200	HJK	/Hz	-0.21744(15)	10
2100	HKJ	/Hz	-24.0662(27)	11
3000	HK	/Hz	834.52(61)	12
40200	h1	/Hz	0.0023411(16)	13
50100	h2	/Hz	0.00013843(73)	14
60000	h3	/Hz	0.00004192(15)	15
400	LJ	/mHz	-0.00003120(23)	16
1300	LJJK	/mHz	0.001431(15)	17
2200	LJK	/mHz	-0.03184(25)	18
3100	LKKJ	/mHz	10.2005(95)	19
4000	LK	/mHz	-315.6(32)	20
40300	l1	/mHz	-0.00001437(14)	21
50200	l2	/mHz	-0.000001178(71)	22
60100	l3	/mHz	-0.000000704(28)	23
70000	l4	/mHz	-0.0000000988(63)	24
4100	PKKJ	/mHz	-0.003353(10)	25

CORRELATION COEFFICIENTS, C.ij:

	A	B	C	-DJ	-DJK	-DK	d1	d2
A	1.0000							
B	-0.0155	1.0000						
C	-0.0058	0.8109	1.0000					
-DJ	0.0209	-0.9189	-0.8342	1.0000				
-DJK	-0.3372	-0.2564	-0.2891	0.2408	1.0000			
-DK	-0.8007	0.1413	0.1320	-0.1183	-0.1431	1.0000		
d1	0.0349	-0.4708	0.1008	0.3463	-0.0150	-0.0471	1.0000	
d2	0.2216	-0.1649	-0.0586	0.1572	0.1263	-0.2609	0.2367	1.0000
HJ	-0.0380	0.8322	0.6688	-0.9560	-0.1531	0.0983	-0.4833	-0.1998
HJK	0.2086	0.2933	0.3386	-0.3066	-0.8896	0.1455	0.0307	-0.0959
HKJ	0.2221	0.0248	0.0183	-0.0442	-0.5590	0.1272	-0.0108	-0.1033
HK	0.7030	-0.1176	-0.1052	0.0988	0.1611	-0.9716	0.0444	0.2268
h1	-0.0458	0.4526	-0.0668	-0.3686	0.0285	0.0492	-0.9762	-0.2647
h2	-0.1819	0.1765	0.0493	-0.1694	-0.1005	0.2108	-0.2766	-0.9750
h3	0.0045	-0.0302	-0.0116	0.0356	0.0379	-0.0093	0.0338	-0.0107
LJ	0.0604	-0.7216	-0.4874	0.8422	0.0588	-0.0882	0.6028	0.2549
LJJK	-0.2029	-0.2561	-0.3074	0.2957	0.7345	-0.0427	-0.0540	0.0419
LJK	0.3016	-0.1421	-0.1295	0.1247	0.5693	-0.7154	0.0539	0.2133
LKKJ	-0.1768	-0.0007	0.0001	0.0264	0.3402	-0.0338	-0.0057	0.0553
LK	-0.6538	0.1037	0.0909	-0.0880	-0.1461	0.9339	-0.0409	-0.2018
l1	0.0571	-0.4257	0.0404	0.3731	-0.0412	-0.0535	0.9220	0.3056
l2	0.1440	-0.2001	-0.0398	0.1909	0.0820	-0.1653	0.3429	0.8991
l3	0.0008	0.0498	0.0114	-0.0534	-0.0424	0.0088	-0.0761	0.1005
l4	0.0031	-0.0256	-0.0147	0.0343	-0.0036	-0.0113	0.0379	-0.2204
PKKJ	0.1563	0.0062	0.0060	-0.0282	-0.3148	0.0296	0.0046	-0.0510
HJ		HJK	HKJ	HK	h1	h2	h3	LJ
HJ	1.0000							
HJK	0.2088	1.0000						
HKJ	0.0378	0.2589	1.0000					

HK	-0.0829	-0.1472	-0.2047	1.0000				
h1	0.5254	-0.0488	0.0050	-0.0438	1.0000			
h2	0.2199	0.0906	0.0608	-0.1833	0.3084	1.0000		
h3	-0.0497	-0.0279	-0.0476	0.0031	-0.0221	0.0585	1.0000	
LJ	-0.9574	-0.0816	-0.0222	0.0739	-0.6682	-0.2815	0.0540	1.0000
LJJK	-0.2055	-0.9409	-0.1687	0.0456	0.0794	-0.0453	0.0387	0.0635
LJK	-0.0991	-0.4923	-0.3835	0.7624	-0.0564	-0.1805	-0.0006	0.0832
LKKJ	-0.0243	-0.1093	-0.9213	0.1113	0.0134	-0.0218	0.0462	0.0060
LK	0.0743	0.1442	0.1976	-0.9899	0.0388	0.1641	0.0008	-0.0648
l1	-0.5418	0.0683	0.0003	0.0453	-0.9818	-0.3494	0.0031	0.7035
l2	-0.2516	-0.0877	-0.0305	0.1429	-0.3786	-0.9689	-0.0742	0.3185
l3	0.0701	0.0390	0.0524	-0.0049	0.0646	-0.1387	-0.9653	-0.0702
l4	-0.0478	-0.0100	0.0352	0.0150	-0.0473	0.2267	0.2787	0.0565
PKKJ	0.0253	0.1114	0.8799	-0.1049	-0.0114	0.0214	-0.0417	-0.0072

LJJK LJK LKKJ LK l1 l2 l3 l4

LJJK	1.0000							
LJK	0.2784	1.0000						
LKKJ	0.1129	0.1234	1.0000					
LK	-0.0527	-0.7641	-0.1114	1.0000				
l1	-0.1080	0.0598	-0.0213	-0.0385	1.0000			
l2	0.0488	0.1528	-0.0014	-0.1282	0.4111	1.0000		
l3	-0.0559	0.0004	-0.0544	0.0022	-0.0316	0.1207	1.0000	
l4	-0.0040	0.0342	-0.0429	-0.0175	0.0408	-0.1658	-0.3762	1.0000
PKKJ	-0.1189	-0.1243	-0.9872	0.1078	0.0186	-0.0015	0.0503	0.0372

PKKJ

PKKJ 1.0000

Mean value of |C.ij|, i.ne.j = 0.2045
Mean value of C.ij, i.ne.j = -0.0316

No correlations with absolute value greater than 0.9950

Worst fitted lines (obs-calc/error):

582:	-6.7	580:	-5.0	2630:	-3.9	2680:	3.7
543:	3.5	132:	-3.3	577:	3.3	2181:	-3.2
581:	-3.1	12:	3.1	1627:	-3.1	2634:	-3.1
160:	-3.0	2632:	-3.0	2590:	-2.9	2138:	2.9
2454:	-2.9	575:	2.9	2588:	-2.8	2386:	2.8
2656:	2.8	2668:	2.8	2592:	-2.7	2324:	2.7
2594:	-2.7	1053:	-2.7	2400:	2.7	2068:	2.7
2180:	2.6	2185:	-2.6	2205:	-2.6	2258:	2.6
2251:	2.6	1051:	-2.6	2268:	2.5	2179:	-2.5
2328:	2.5	2067:	2.5	1962:	2.5	2402:	2.5
2340:	2.5	2636:	-2.5	129:	-2.4	390:	2.4
2176:	2.4	208:	2.4	2262:	2.4	2168:	2.4
965:	-2.4	90:	-2.4				

582/ 79 10 69	79 9 70	508833.0120	-0.2675	0.040		
580/ 77 10 68	77 9 69	508795.8890	-0.2007	0.040		
2630/ 43 23 20	42 23 19	235452.5800	-0.1165	0.030	-0.1165	0.50
2680/ 56 24 32	55 24 31	306689.6750	0.1121	0.030	0.1122	0.50
543/ 76 6 70	75 6 69	410800.2420	0.0869	0.025		
132/ 18 4 14	17 4 13	96912.9240	-0.0500	0.015		
577/ 37 10 27	37 9 28	504665.6420	0.1306	0.040	0.1306	0.50

2181/ 38 6 33 38 5 34
581/ 78 10 68 78 9 69
12/ 67 6 61 66 7 60

294052.4940 -0.0946 0.030
508815.6560 -0.1260 0.040
20600.1100 0.0928 0.030

/ SPFIT output reformatted with PIFORM

MESS input file

```
!*****
!           GLOBAL SECTION
!*****
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!
!
TemperatureList[K]           70 80 90 100 110 120 130 140
                              150 160 170 180 190 200 210
                              220 230 240 250 260 270 280
                              290 300 310 320 330 340 350
                              360 370 380 390 400 410 420
                              430 440 450 460 470 480 490
                              500 510 520 530 540 550 560
                              570 580 590 600

PressureList[atm]           1.e-8 1

!
!
EnergyStepOverTemperature    .2
!EnergyStep[1/cm]           5.
ExcessEnergyOverTemperature  30
ModelEnergyLimit[kcal/mol]   400
!
CalculationMethod            low-eigenvalue
!
WellCutoff                   20
!GlobalCutoff[kcal/mol]     -60.
ChemicalEigenvalueMax        0.2
!
ReductionMethod               projection
!
!!!!!!!!!!test!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!WellCutoff                   10
!ChemicalEigenvalueMin       1.e-6
!!!!!!!!!!test!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
AtomDistanceMin[bohr]        1.3
!!
RateOutput                    rate.out
!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

```

!*****
!
!           MODEL SECTION
!*****
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!
!
Model
!
  EnergyRelaxation
    Exponential
      Factor[1/cm]           260
      Power                   0.85
      ExponentCutoff         15

End
!
CollisionFrequency
  LennardJones
    Epsilons[K]              127.697  1280.940
    Sigmas[angstrom]         3.462    4.495
    Masses[amu]              39.948  44.076

End
!
!*****
!
!*****
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!*****
! REACTANT HCCN + HCO
!*****

Bimolecular REACS
Fragment C2HN
RRHO
Geometry[angstrom]          4
C   -0.000000    0.103911    0.000000
N   -0.006271    1.273383    0.000000
C   -0.081610   -1.236965   -0.000000
H    0.533558   -2.115360   -0.000000
Core RigidRotor
SymmetryFactor    1.0000000000000000

End

```

```

    Frequencies[1/cm]      6
405.5458 464.6264 670.6757
1117.3604 2024.2854 3341.8505
ZeroEnergy[kJ/mol]      0.
ElectronicLevels[1/cm]      1
    0      3
!*****
End
!*****
Fragment CHO
RRHO
Geometry[angstrom]      3
C    0.061354    0.586225    0.000000
O    0.061354   -0.592725   -0.000000
H   -0.858950    1.224454    0.000000
Core RigidRotor
SymmetryFactor    1.0000000000000000
End
    Frequencies[1/cm]    3
1118.9189 1898.8992 2722.8418
ZeroEnergy[kJ/mol]      0.
ElectronicLevels[1/cm]      1
    0      2
!*****
End
!*****
GroundEnergy[kJ/mol] 0.0
End
!*****
! PRODUCT CK + H
!*****
Bimolecular P1
Fragment CK
RRHO
Geometry[angstrom]      6
C    1.191505    0.650958    0.000000
N    2.354669    0.686923    0.000000
C   -0.227002    0.636060    0.000000
H   -0.801474    1.551742    0.000000
C   -0.892097   -0.514456    0.000000
O   -1.489837   -1.503455    0.000000

```

```

Core RigidRotor
SymmetryFactor 1.0000000000000000
End

Frequencies[1/cm] 12
143.3086 390.9933 408.7424
525.6487 565.2678 653.5796
977.1477 1135.0927 1395.3604
2221.6775 2267.9691 3226.7073
ZeroEnergy[kJ/mol] 0.
ElectronicLevels[1/cm] 1
0.0000000000000000 1.0000000000000000
!*****
End
!*****
Fragment HYDROGEN
Atom
Name H
ElectronicLevels[1/cm] 1
0 2
!*****
End
!*****
GroundEnergy[kJ/mol] -201.10
End
!*****
! PRODUCT CO + H2C2N
!*****
Bimolecular P2
Fragment CO
RRHO
Geometry[angstrom] 2
C -0.007312 1.577511 0.000000
O 1.125458 1.577511 0.000000
Core RigidRotor
SymmetryFactor 1.0000000000000000
End

Frequencies[1/cm] 1
2159.3144
ZeroEnergy[kJ/mol] 0.
ElectronicLevels[1/cm] 1
0.0000000000000000 1.0000000000000000

```



```

!*****
End
!*****
Fragment H2C2N
RRHO
Geometry[angstrom]          5
C   -0.415437    0.627729    0.000000
N    0.745426    0.627729    0.000000
C   -1.813491    0.627729   -0.000000
H   -2.348726    1.564314   -0.000000
H   -2.348726   -0.308856    0.000000
Core RigidRotor
SymmetryFactor  1.0000000000000000
End
Frequencies[1/cm]    9
377.5855 440.5768 626.9997
1021.9024 1045.9731 1462.6707
2311.9323 3198.1819 3313.9234
ZeroEnergy[kJ/mol]    0.
ElectronicLevels[1/cm]    1
0.0000000000000000    2.0000000000000000
!*****
End
!*****
GroundEnergy[kJ/mol] -373.80
End
!*****
! PRODUCT OH + C3HN
!*****
Bimolecular P3
Fragment HO
RRHO
Geometry[angstrom]          2
O   -1.231670    1.047975   -0.000000
H   -1.556033    1.963948    0.000000
Core RigidRotor
SymmetryFactor  1.0000000000000000
End
Frequencies[1/cm]    1
3757.1217
ZeroEnergy[kJ/mol]    0.

```

```

ElectronicLevels[1/cm]          1
0.0000000000000000          2.0000000000000000
!*****

End

!*****

Fragment C3HN
RRHO
Geometry[angstrom]             5
C   0.000000   0.000000   0.706990
N   0.000000   0.000000   1.926524
C   0.000000   0.000000  -0.588398
C   0.000000   0.000000  -1.876122
H   0.000000   0.000000  -2.940500

Core RigidRotor
SymmetryFactor   1.0000000000000000
End

Frequencies[1/cm]    9
429.1575 429.1575 501.7467
501.7467 583.6872 583.6872
929.8372 1720.8412 2088.2366 3449.2140
ZeroEnergy[kJ/mol]      0.
ElectronicLevels[1/cm]          1
0.0000000000000000          1.0000000000000000
!*****

End

!*****

GroundEnergy[kJ/mol] -114.1
End

!*****

! MIN1

!*****

Well MIN1
Species
RRHO   ! well
Geometry[angstrom]             7
H   -0.817415   1.474065   0.000072
H   -2.182009  -0.949058  -0.000049
O   -2.189131   0.028862  -0.000034
C   1.372056  -0.122365   0.000001
C   -0.929865   0.391393   0.000027
C   0.058417  -0.597573   0.000048

```

```

N      2.501261      0.173626      -0.000030
Core RigidRotor
SymmetryFactor      1.0000000000000000
End
      Frequencies[1/cm]          15
173.5680 202.3089 480.7108
565.2857 579.3315 807.9536
952.8943 1237.1935 1239.1944
1291.1124 1386.8445 1551.6400
2253.5917 3154.6520 3618.6252
ZeroEnergy[kJ/mol]      -212.0
ElectronicLevels[1/cm]          1
      0.0000000000000000      2.0000000000000000
End
End
!*****
! MIN2
!*****
Well MIN2
Species
RRHO      ! well
Geometry[angstrom]          7
H      0.740266      -1.483484      0.000000
H      0.262437      1.619943      0.000000
O      2.234471      -0.119195      0.000000
C      -1.349121      0.183922      0.000000
C      1.068673      -0.430022      0.000000
C      0.000000      0.570686      0.000000
N      -2.456540      -0.161488      0.000000
Core RigidRotor
SymmetryFactor      1.0000000000000000
End
      Frequencies[1/cm]          15
133.8115 173.5910 442.9218
463.1081 547.4054 668.1932
1015.0796 1037.6879 1107.4384
1302.6554 1438.8183 1854.2902
2349.4901 2987.7289 3232.0143
ZeroEnergy[kJ/mol]      -370.3
ElectronicLevels[1/cm]          1
      0.0000000000000000      2.0000000000000000

```

```

End
End
!*****
! MIN3
!*****
Well MIN3
Species
RRHO      ! well
Geometry[angstrom]          7
H   -0.032076   1.648439   -0.877688
H   -0.032076   1.648439   0.877688
O    1.597633   -0.852578   0.000000
C   -1.131867   0.076671   0.000000
C    1.360774   0.300842   0.000000
C    0.000000   1.000790   0.000000
N   -2.012905   -0.678008   0.000000
Core RigidRotor
SymmetryFactor  1.0000000000000000
End
      Frequencies[1/cm]          15
125.0262 147.5314 339.9476
383.4033 683.3892 811.3342
850.0601 959.8829 1222.8590
1294.0898 1442.3621 1919.0362
2286.4506 3089.6895 3134.2946
ZeroEnergy[kJ/mol]      -364.4
ElectronicLevels[1/cm]          1
0.0000000000000000      2.0000000000000000
End
End
!*****
! BARRIERLESS ENTRANCE CHANNEL - PHASE SPACE THEORY
!*****
Barrier B0 REACS MIN2
RRHO
      Stoichiometry C3H2N101
Core PhaseSpaceTheory
      FragmentGeometry[angstrom]          4
C   -0.000000   0.103911   0.000000
N   -0.006271   1.273383   0.000000
C   -0.081610   -1.236965   -0.000000

```

```

H      0.533558   -2.115360   -0.000000
      FragmentGeometry[angstrom]          3
C      0.061354    0.586225    0.000000
O      0.061354   -0.592725   -0.000000
H     -0.858950    1.224454    0.000000
SymmetryFactor      1.0000000000000000
      PotentialPrefactor[au] 90.116
      PotentialPowerExponent 6
      End
      Frequencies[1/cm]          9
405.5458 464.6264 670.6757
1117.3604 2024.2854 3341.8505
1118.9189 1898.8992 2722.8418
ZeroEnergy[kJ/mol]          0.
ElectronicLevels[1/cm]          1
      0.0000000000000000      2.0000000000000000
      End
!*****
Barrier TS1 MIN1 P3
RRHO
      Geometry[angstrom]          7
H      1.905260   -1.490882    0.000005
H      1.488400    1.455475    0.000086
O      2.146607    0.741938   -0.000014
C     -1.416147   -0.023495   -0.000008
C      1.020941   -0.896331    0.000016
C     -0.136982   -0.548852   -0.000011
N     -2.481914    0.415991    0.000005
Core RigidRotor
      SymmetryFactor      1
      End
Tunneling Eckart
      ImaginaryFrequency[1/cm] 662.1192
      WellDepth[kJ/mol]      111.6
      WellDepth[kJ/mol]      13.7
      End
      Frequencies[1/cm]      14
106.0129 124.2765 241.9624
305.1007 553.8910 557.3996
764.5988 789.0819 873.6844
899.3310 2211.2915 2796.3376

```

```

3463.9993 3754.8186
  ZeroEnergy[kJ/mol]      -100.4
  ElectronicLevels[1/cm]      1
    0      2

```

End

!*****

Barrier TS2 MIN2 MIN1

RRHO

```

  Geometry[angstrom]      7
H   1.094507   1.609566  -0.000433
H   1.322800  -1.096370  -0.000047
O   2.137383  -0.164837   0.000183
C  -1.368722  -0.092032  -0.000278
C   1.056105   0.523810   0.000008
C  -0.003811  -0.401960  -0.000220
N  -2.516830   0.089513   0.000280

```

Core RigidRotor

SymmetryFactor 1

End

Tunneling Eckart

ImaginaryFrequency[1/cm] 1723.1626

WellDepth[kJ/mol] 226.7

WellDepth[kJ/mol] 68.4

End

Frequencies[1/cm] 14

101.4413 191.1919 437.8208

575.2906 631.6467 987.9693

1034.2946 1121.1177 1204.8788

1402.9143 1485.3077 2022.8050

2347.5087 3192.8189

ZeroEnergy[kJ/mol] -143.60

ElectronicLevels[1/cm] 1

0 2

End

!*****

Barrier TS3 MIN2 P2

RRHO

```

  Geometry[angstrom]      7
H  -0.788177   0.626006   1.173741
H   0.370476   1.831122  -0.856351
O  -1.971613  -0.519208  -0.354212

```

```

C    1.342252    0.110860   -0.066856
C   -1.420518    0.007851    0.499793
C    0.355601    1.089660   -0.060323
N    2.075231   -0.793385    0.040089
Core RigidRotor
  SymmetryFactor  1
End
Tunneling  Eckart
  ImaginaryFrequency[1/cm]  1733.2042
  WellDepth[kJ/mol]    338.70
  WellDepth[kJ/mol]    342.2
  End
  Frequencies[1/cm]      14
52.6419 97.3969 159.9249
362.4099 481.1318 497.0167
698.4524 992.5771 1033.4019
1135.7968 2005.1719 2238.9489
3023.1363 3154.4887
  ZeroEnergy[kJ/mol]      -31.6
  ElectronicLevels[1/cm]      1
    0      2
End
!*****
Barrier TS4 MIN2 P1
RRHO
  Geometry[angstrom]      7
H    0.056263    1.755196    0.199319
H    0.410123   -1.432837    0.719744
O    2.231259   -0.278273   -0.102651
C   -1.324377    0.085270   -0.013085
C    1.105673   -0.007942    0.023879
C   -0.047242    0.685173    0.062290
N   -2.388684   -0.381595   -0.076623
Core RigidRotor
  SymmetryFactor  1
End
Tunneling  Eckart
  ImaginaryFrequency[1/cm]  1038.5219
  WellDepth[kJ/mol]    197.8
  WellDepth[kJ/mol]    28.6
  End

```

```

Frequencies[1/cm]          14
127.3807 181.5133 409.7825
458.4265 534.4400 585.8672
618.4935 648.7018 992.2059
1156.8374 1394.0056 2173.5469
2287.2772 3196.2881
ZeroEnergy[kJ/mol]        -172.50
ElectronicLevels[1/cm]    1
0      2

```

End

!*****

Barrier TS6 MIN3 P2

RRHO

```

Geometry[angstrom]        7
H      0.238587    1.725742    0.917339
H      0.238731    1.725863   -0.917344
O     -1.699563   -0.820457   -0.000058
C      1.216144    0.059299   -0.000013
C     -1.570291    0.315840    0.000094
C      0.313791    1.157792   -0.000037
N      1.908758   -0.869364    0.000029

```

Core RigidRotor

SymmetryFactor 1

End

Tunneling Eckart

```

ImaginaryFrequency[1/cm] 483.0193
WellDepth[kJ/mol]    25.7
WellDepth[kJ/mol]    35.1

```

End

```

Frequencies[1/cm]          14
29.9039 113.2648 318.5175
361.9625 513.0426 652.0266
898.9656 992.3545 1078.4428
1458.3355 2040.3496 2434.8845
3168.5574 3264.5009
ZeroEnergy[kJ/mol]        -338.7
ElectronicLevels[1/cm]    1
0      2

```

End

!*****

Barrier TS7 MIN3 P1


```

RRHO
  Geometry[angstrom]      7
H   0.084897   1.607176  -0.850573
H  -0.124555   1.772434   1.205845
O   2.130721  -0.558987   0.064571
C  -1.235646   0.061316  -0.090532
C   1.135590  -0.011821  -0.143442
C   0.019536   0.747944  -0.192772
N  -2.261060  -0.473467   0.006902
Core RigidRotor
  SymmetryFactor  1
End
Tunneling  Eckart
  ImaginaryFrequency[1/cm]  1164.9949
  WellDepth[kJ/mol]  194.2
  WellDepth[kJ/mol]  30.9
End
  Frequencies[1/cm]      14
139.5918 298.7141 385.1152
401.2263 529.0510 618.4921
638.7003 850.4058 967.7239
1122.9590 1361.0624 2187.0787
2329.4996 3193.1941
  ZeroEnergy[kJ/mol]      -170.2
  ElectronicLevels[1/cm]      1
    0      2
End
!*****
Barrier TS8 MIN2 MIN3
RRHO
  Geometry[angstrom]      7
H  -0.094620   1.918722  -0.273903
H   0.971320   1.068514   0.959451
O   1.801806  -0.777520  -0.020740
C  -1.228119   0.072586  -0.031527
C   1.257589   0.285000  -0.031462
C  -0.028939   0.858976  -0.074476
N  -2.184903  -0.580920   0.043595
Core RigidRotor
  SymmetryFactor  1
End

```

```

Tunneling   Eckart
  ImaginaryFrequency[1/cm]  1364.0398
  WellDepth[kJ/mol]        176.1
  WellDepth[kJ/mol]        170.2
  End
  Frequencies[1/cm]         14
140.8881 310.4192 378.2160
574.0478 653.5964 711.0313
925.7703 1138.6818 1202.9268
1378.6654 1897.3723 1956.4136
2386.9304 3235.7562
  ZeroEnergy[kJ/mol]        -194.2
  ElectronicLevels[1/cm]    1
    0      2
  End
End

```

MESS output file

Reactant = P0 Pressure = 1e-08 atm

T(K)	W0	W1	W2	P1	P2	P3	Loss	Capture
70	***	7.36e-19	***	8.11e-11	4.32e-11	8.26e-13	1.25e-10	1.25e-10
80	***	4.4e-19	***	8.3e-11	4.41e-11	8.52e-13	1.28e-10	1.28e-10
90	***	2.56e-19	***	8.48e-11	4.49e-11	8.76e-13	1.31e-10	1.31e-10
100	***	1.52e-19	2.38e-23	8.63e-11	4.56e-11	8.99e-13	1.33e-10	1.33e-10
110	***	8.83e-20	5.54e-24	8.78e-11	4.63e-11	9.22e-13	1.35e-10	1.35e-10
120	***	4.01e-18	1.77e-24	8.92e-11	4.68e-11	9.43e-13	1.37e-10	1.37e-10
130	***	2.97e-20	9.08e-25	9.05e-11	4.74e-11	9.64e-13	1.39e-10	1.39e-10
140	***	1.71e-20	5.84e-25	9.17e-11	4.78e-11	9.85e-13	1.41e-10	1.41e-10
150	***	1.04e-20	5.2e-25	9.28e-11	4.83e-11	1.01e-12	1.42e-10	1.42e-10
160	***	6.32e-21	5.99e-25	9.39e-11	4.87e-11	1.03e-12	1.44e-10	1.44e-10
170	***	3.77e-21	8.71e-25	9.5e-11	4.91e-11	1.05e-12	1.45e-10	1.45e-10
180	***	3.76e-19	1.14e-24	9.6e-11	4.94e-11	1.07e-12	1.47e-10	1.47e-10
190	***	2.44e-19	1.45e-24	9.7e-11	4.98e-11	1.09e-12	1.48e-10	1.48e-10
200	***	8e-22	1.63e-19	9.79e-11	5.01e-11	1.11e-12	1.49e-10	1.49e-10
210	***	4.39e-22	2.29e-24	9.88e-11	5.04e-11	1.13e-12	1.5e-10	1.5e-10
220	***	2.93e-22	6.74e-20	9.97e-11	5.06e-11	1.15e-12	1.51e-10	1.52e-10
230	***	1.8e-22	3.36e-24	1.01e-10	5.09e-11	1.17e-12	1.53e-10	1.53e-10
240	***	1.1e-22	3.93e-24	1.01e-10	5.11e-11	1.19e-12	1.54e-10	1.54e-10
250	***	6.59e-23	4.68e-24	1.02e-10	5.13e-11	1.21e-12	1.55e-10	1.55e-10
260	***	4.29e-23	5.45e-24	1.03e-10	5.15e-11	1.23e-12	1.56e-10	1.56e-10
270	***	3.02e-23	6.33e-24	1.04e-10	5.17e-11	1.25e-12	1.57e-10	1.57e-10
280	***	1.93e-23	7.32e-24	1.04e-10	5.19e-11	1.27e-12	1.58e-10	1.58e-10
290	***	1.48e-23	8.36e-24	1.05e-10	5.21e-11	1.29e-12	1.59e-10	1.59e-10
300	***	9.97e-24	9.5e-24	1.06e-10	5.22e-11	1.31e-12	1.59e-10	1.6e-10
310	***	8e-24	1.09e-23	1.07e-10	5.24e-11	1.33e-12	1.6e-10	1.6e-10
320	***	6.2e-24	1.23e-23	1.07e-10	5.25e-11	1.35e-12	1.61e-10	1.61e-10
330	***	4.78e-24	1.36e-23	1.08e-10	5.26e-11	1.37e-12	1.62e-10	1.62e-10
340	***	3.63e-24	2.51e-22	1.09e-10	5.27e-11	1.39e-12	1.63e-10	1.63e-10
350	***	3.11e-24	***	1.09e-10	5.28e-11	1.41e-12	1.64e-10	1.64e-10
360	***	2.44e-24	***	1.1e-10	5.29e-11	1.43e-12	1.64e-10	1.64e-10
370	***	2.2e-24	***	1.11e-10	5.3e-11	1.45e-12	1.65e-10	1.65e-10
380	5.14e-23	1.83e-24	***	1.11e-10	5.31e-11	1.47e-12	1.66e-10	1.66e-10
390	4.49e-23	1.58e-24	***	1.12e-10	5.32e-11	1.5e-12	1.66e-10	1.67e-10
400	4.19e-23	1.49e-24	***	1.12e-10	5.32e-11	1.52e-12	1.67e-10	1.67e-10
410	4.16e-23	1.36e-24	***	1.13e-10	5.33e-11	1.54e-12	1.68e-10	1.68e-10
420	4.46e-23	1.13e-24	***	1.14e-10	5.34e-11	1.56e-12	1.69e-10	1.69e-10
430	***	1.12e-24	***	1.14e-10	5.34e-11	1.58e-12	1.69e-10	1.69e-10

440	***	1.03e-24	***	1.15e-10	5.35e-11	1.61e-12	1.7e-10	1.7e-10
450	***	9.75e-25	***	1.15e-10	5.35e-11	1.63e-12	1.7e-10	1.71e-10
460	***	1.09e-24	***	1.16e-10	5.35e-11	1.65e-12	1.71e-10	1.71e-10
470	***	9.17e-25	***	1.16e-10	5.36e-11	1.67e-12	1.72e-10	1.72e-10
480	***	8.4e-25	***	1.17e-10	5.36e-11	1.7e-12	1.72e-10	1.73e-10
490	***	9.54e-25	***	1.17e-10	5.36e-11	1.72e-12	1.73e-10	1.73e-10
500	***	9.83e-25	***	1.18e-10	5.36e-11	1.74e-12	1.73e-10	1.74e-10
510	***	1.05e-24	***	1.18e-10	5.36e-11	1.76e-12	1.74e-10	1.74e-10
520	***	9.74e-25	***	1.19e-10	5.36e-11	1.79e-12	1.74e-10	1.75e-10
530	***	9.7e-25	***	1.2e-10	5.36e-11	1.81e-12	1.75e-10	1.75e-10
540	***	9.53e-25	***	1.2e-10	5.36e-11	1.83e-12	1.75e-10	1.76e-10
550	***	1e-24	***	1.2e-10	5.36e-11	1.86e-12	1.76e-10	1.77e-10
560	***	9.42e-25	***	1.21e-10	5.36e-11	1.88e-12	1.76e-10	1.77e-10
570	***	1.14e-24	***	1.21e-10	5.36e-11	1.9e-12	1.77e-10	1.78e-10
580	***	1.2e-24	***	1.22e-10	5.36e-11	1.93e-12	1.77e-10	1.78e-10
590	***	1.21e-24	***	1.22e-10	5.35e-11	1.95e-12	1.78e-10	1.79e-10
600	***	1.13e-24	***	1.23e-10	5.35e-11	1.97e-12	1.78e-10	1.79e-10