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OP

THIS BOOK BELONGS TO

CLASS OF _____

HARVARD COÖPERATIVE SOCIETY

. . . JOIN THE COÖP . . .

COÖP PURCHASES PAY DIVIDENDS

Page	Plate no.
3	A 17860
51	A 17119
73	A 16992
93	A 17971 was. C.D.B., F.W.W.
141	A 15781 " " "

A 17860

counted stars have circles

14.8 Jm

15.1 Jm

15.2

15.5

(15.7) RAP

(16.1) RAP

16.35

(16.6) RAP

16.9

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(17.6~~6~~) RAP

17.8

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V.M.C.K.

Interpolations made by F.W.W.

16.9 changed to 17.1

17.66 " " 17.6

A 17860

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Square 1

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Square 12

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Square 13

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2098	747

Square 14

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749	774
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752	777
753	778
754	779
755	780
756	781
757	782
758	783
759	784
760	785
761	786
762	787
763	788
764	789
765	790
766	791
767	792
768	793
769	794
770	795
771	796
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812	837
813	838
814	839
815	840
816	841
817	842
818	843
819	844
820	845
821	846
822	847
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Square 19

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1918	2256
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2238	1810
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Square 3

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Square 5

Square 6

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Square 8

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Square 9

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Square 10

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Square 11

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Square 12

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Square 13

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377	400
378	401
379	402
380	403
381	404
382	405
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386	409
387	410
LC5197	411

Square 14

388	412
389	413
390	414
391	415
392	416
393	417
394	418
395	419
396	420
397	421
398	422
399	423
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Square 15

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Square 17

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Square 19

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Square 20

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Square 21

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Square 22

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Square 23

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Square 24

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Out East

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Square 25

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Out West

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864	889
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866	891
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869	894
870	895
871	896
872	897
873	898
874	899
875	900
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877	902
878	903
879	904
880	905
881	906

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out North

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out South

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Square 1

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Square 2

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20	HN
21	HN

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Square 3

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Square 4

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Square 5

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Square 6

Square 7

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Square 8

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Square 9

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186	210
187	211
188	212
189	N 7424
190	Square 11
191	213
192	214
Square 10	215
193	216
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Square 12

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<i>Square 13</i>	307
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Square 14

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369 Square 15

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N 7410

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Square 16

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Square 17

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Square 19

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Square 20

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Square 21

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Square 22

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Square 24

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Square 25

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Out East

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647	668
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649	670
650	671
651	672
652	673
653	674
654	675
655	676
656	677
	678
N7456	679
N7462	680
IC5273	681
Orion West	682
657	683
658	684
659	685
660	686

687

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N 7297

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Out North

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N7322

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N7418

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Out South

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A 17971

Counted stars have circles

(14.6)

M.D.

14.7

15.0

(15.3)

E.J.

15.5

15.8

15.9

(16.2)

E.J.

16.3

16.6

16.8

16.9

(17.1)

E.J.

17.4

17.5

17.8

17.7 changed to 17.8

(17.8)

E.J.

18.0

18.2

18.5

18.7

(18.9)

R.E.R. + W.IV. + V. McK.

Interpolations made by F.W.W.

A17971

2 40 -20

Square 1

CDB

FWW

Square 2

1	16.5	16.5	16.5 ✓		17	17.9	18.0	
						17.6	18.2	17.9 ✓
2	16.3	16.4	16.4 ✓			17.6	17.9	17.8 ✓
					18	17.5	18.4	18.2
3	16.7	16.8	16.7 ✓			17.8	18.0	
					19	17.6	18.4	17.9 ✓
4	17.0	17.0	17.0 ✓					
					20	17.1	17.0	17.0 ✓
5	16.8	17.3	17.0 ✓					
					21	16.3	16.4	16.3 ✓
6	16.7	16.6	16.7 ✓					
					22	17.2	17.0	17.1 ✓
7	16.4	16.8	16.6 ✓					
					23	18.3	18.6	18.4 ✓
8	17.3	17.3	17.3 ✓					
					24	18.1	18.5	18.3 ✓
9	18.3	18.6	18.4 ✓					
					25	18.3	18.7	18.5
10	18.4	18.7	18.5 ✓	neb?				
					26	17.6	17.4	17.5 ✓
11	18.2	18.7	18.4 ✓					
					27	16.0	15.8	
12	16.5	16.1	16.3 ✓			15.7	16.3	16.0
					28	18.1	18.2	18.1 ✓
13	17.1	16.6	16.9 ✓					
					29	18.0	18.2	18.1 ✓
14	16.8	16.9	16.8 ✓					
					30	18.3	18.4	18.4 ✓
15	17.7	17.3	17.5 ✓					
					31	15.1	15.0	15.1
16	.	ng						
					32	18.6	18.7	18.7 ✓
1919	16.4	16.3	16.3 ✓					
					33	17.3	17.3	17.3 ✓
1920	17.3	17.3	17.3 ✓	neb?				
					34	18.1	17.8	18.0 ✓
1921	16.8	17.1	17.0 ✓					
					35	18.7	18.8	18.7 ✓
1922	18.1	18.1	18.1 ✓					
					36	18.5	18.9	18.7 ✓
1923	17.9	18.2	18.1 ✓	neb?				
					37	17.9	17.9	17.9 ✓
					38	16.4	16.1	16.2

spiral on
Edge

39	18.3	17.9	18.1 ✓	Joint K m P	55	18.4	18.7	18.6 ✓	
40	18.5 18.2	18.3 18.7	18.4 ✓		56	15.6	15.6	15.6 ✓	
41	17.9	17.7	17.8 ✓		57	17.8	18.1	17.9 ✓	
42	18.0	17.9		neb?	58		n 2		
43	18.5	18.5	18.5 ✓		59	17.0	17.3	17.2 ✓	
44	18.3	18.2	18.3 ✓		60	18.2	18.5	18.4 ✓	
45	18.6	18.7	18.6 ✓		61	18.6	18.8	18.7 ✓	
46	17.7	17.8	17.7 ✓		62	18.1	17.8	17.9 ✓	
47	17.3	17.7	17.5 ✓		63	18.8	18.8	18.8	neb?
48	17.8	18.2	18.0 ✓		64	17.7	17.5	17.6 ✓	
49	18.7	18.8	18.8 ✓		65	18.5	18.5	18.5 ✓	
50	18.1	18.5	18.3 ✓		66	15.6	15.4	15.6 ✓	
51	18.5 18.2	18.7 18.7	18.5 ✓		67	15.0	15.0	15.0 ✓	
52	17.5	17.6	17.5 ✓		68	18.6	18.5	18.6 ✓	
53	17.9	17.8	17.8 ✓		69	17.6	18.0	17.8 ✓	
1924	18.1	17.7	17.9 ✓		70	15.2	15.1	15.1 ✓	15.3 Spinal ✓
1925	18.5	17.8		neb?	71	18.7	18.8	18.8 ✓	
1926	18.6	18.5	18.5 ✓		72	18.4	18.1	18.3 ✓	
1927	18.3	17.9	18.1 ✓		73	17.7	17.7	17.7 ✓	
1928	18.6	18.9	18.8 ✓		74	17.2	16.9	17.0 ✓	F3B? ✓
1929	18.4	18.6	18.5 ✓		75	18.7	18.6	18.7 ✓	
1930	18.5	18.6	18.5 ✓		76	15.0	15.0	15.0 ✓	
1931	18.3	18.5	18.4 ✓		77	18.4	18.7	18.6 ✓	neb?
Square 3					78	15.0	15.0	15.0 ✓	
84	17.9	18.1	18.0 ✓		79	15.3	15.4	15.3 ✓	

80	18.7	18.9	18.8 ✓	105	16.0	16.1	16.0 ✓
81	18.6	18.7	18.6 ✓	106	15.8	15.9	15.9 ✓
82	18.5	18.6	18.5 ✓	107	18.6	18.7	18.6 ✓
83	18.7	18.8	18.8 ✓	108	18.5	18.1	18.3 ✓
84	17.9	17.7	17.8 ✓	109	18.3	18.2	18.3 ✓
85	18.3 18.4	17.9 17.6	18.0 ✓	110	18.4	18.4	18.4 ✓
86	18.0 17.6	17.4 17.0	17.5 ✓	111	15.0	15.3	15.2 ✓
87	17.4	17.4	17.4 ✓	112	17.0	17.2	17.1 ✓
88	18.3	18.0	18.1 ✓	113		n g	
89	16.7 16.7	16.1 16.2	16.4 ✓	114	18.0	17.7	17.9 ✓
90	18.3	18.3	18.3 ✓	115	17.4	17.7	17.6 ✓
91	17.5 17.7	17.3 17.2	17.4 ✓	1932	18.6	18.5	18.5 ✓
92	18.7	18.9	18.8 ✓	1933	18.7	18.7	18.7 ✓
93	18.1	18.2	18.2 ✓	1934	18.6	18.8	18.7 ✓
94	16.6	17.0	16.8 ✓	Square 4			
95	18.4	18.5	18.5 ✓	116	18.1	18.4	18.2 ✓
96	18.6	18.7	18.6 ✓	117	17.6	17.5	17.5 ✓
97	18.2	18.2	18.2 ✓	118	16.6	16.7	16.6 ✓
98	18.6	18.8	18.7 ✓	119	18.3	18.1	18.2 ✓
99	18.6	18.8	18.7 ✓	120	18.8	18.7	18.7 ✓
100	18.1	17.8	17.9 ✓	121	18.4	18.6	18.5 ✓
101	17.5	17.6	17.6 ✓	122	18.5	18.7	18.6 ✓
102	17.6	17.5	17.5 ✓	123	17.3	17.5	17.4 ✓
103	18.6	18.2	18.4 ✓	124	17.8	17.6	17.7 ✓
104	16.9	16.7	16.8 ✓	125	16.8	17.1	17.0 ✓

Spind on
Edge

neb?

} pair

126	16.0	15.9	15.9 ✓		151	18.2	18.6	18.4 ✓	
127	17.2	17.4	17.3 ✓		152	18.1	18.0	18.0 ✓	
128	17.1	17.4	17.2 ✓		153	16.8	17.2	17.0 ✓	
129	17.7	17.8	17.7 ✓		154	18.1	18.2	18.1 ✓	neb?
130	16.4	16.2	16.3 ✓		155	18.0	18.2	18.1 ✓	
131	17.3	17.2	17.2 ✓		156	18.4	18.6	18.5 ✓	
132	16.5	16.7	16.6 ✓		157	17.6	17.8	17.7 ✓	
133	18.3	18.3	18.3 ✓	neb?	158	17.0	17.4	17.2 ✓	
134	17.8 18.0	17.5 17.4	17.7 ✓		159	17.8	17.8	17.8 ✓	
135				= N1102	160	18.5	18.7	18.6 ✓	
136	18.6	18.7	18.7 ✓	F W W neb?	161	18.3	18.5	18.4 ✓	
137	15.3	15.4	15.4 ✓		162	17.9	18.2	18.0 ✓	F W W neb?
138	16.4	16.7	16.5 ✓		163	18.1	18.5	18.3 ✓	} pairs
139	15.0	15.0	15.0 ✓		164	17.0	17.4	17.2 ✓	
140	16.9	17.0	17.0 ✓		165		~ g		
141	15.4	15.0	15.2 ✓		166	18.0	18.2	18.1 ✓	
142	18.3	18.2	18.3 ✓		167	17.8	17.8	17.8 ✓	
143		~ g			168	17.1	17.5	17.3 ✓	
144	17.4	17.6	17.5 ✓		169	18.1	18.2	18.1 ✓	
145	15.6	15.5	15.6 ✓		170	17.9	17.9	17.9 ✓	
146	15.9	15.8	15.9 ✓		171	18.6	18.7	18.6 ✓	
147	17.8	18.0	17.9 ✓		172	18.2	18.6	18.4 ✓	
148	16.7	17.0	16.8 ✓			17.3 16.9	16.4 16.4	16.7 ✓	
149	17.4	17.8	17.6 ✓		173				
					174	17.3	17.3	17.3 ✓	
150	17.8	17.9	17.9 ✓		175	17.6	17.8	17.7 ✓	

176	17.5	17.6	17.5 ✓		189	17.6	17.5	17.6 ✓	
177	16.8	17.1	17.0 ✓		190	17.4	17.6	17.5 ✓	
178	17.8	18.0	17.9 ✓		191	18.6	18.6	18.6 ✓	
179	17.9	17.7	17.8 ✓	neb? ✓	192	18.5	18.6	18.5 ✓	
180	17.8	18.2	18.0 ✓		193	115.0	115.0	115.0 ✓	
181	17.3	17.3	17.3 ✓		194	16.8	17.3	17.0 ✓	
182	18.2	18.6	18.4 ✓		195	15.3	15.0	15.1 ✓	
183	16.5	16.3	16.4 ✓		196	16.6	16.2	16.4 ✓	
1935	18.4	18.6	18.5 ✓		197	18.5	18.2	18.4 ✓	neb? ✓
1936	17.7	17.6	17.7 ✓		198	15.0	15.0	15.0 ✓	
1937	17.9	17.8	17.8 ✓		199	16.9	17.3	17.1 ✓	
1938	17.8	17.8	17.8 ✓	neb? ✓	200	17.6	18.1	17.9 ✓	
1939	18.6	18.7	18.7 ✓		201	17.4	17.7	17.6 ✓	
1940	18.7	18.9	18.8 ✓	FWWneb? ✓	202	16.5	16.3	16.4 ✓	
1941	17.3	17.5	17.4 ✓		203	16.4	17.1	16.7 ✓	
1942	18.0	18.1	18.0 ✓	neb? ✓	204	17.6	18.1	17.8 ✓	
1943	18.4			neb? ✓	205	17.1	17.2	17.1 ✓	
1944	18.3	18.1	18.2 ✓		206	16.3	16.7	16.5 ✓	neb? ✓
N1102	115.0	115.0	115.0 ✓		1945	17.5	17.5	17.5 ✓	
Square 5					1946	18.2	17.6	17.9 ✓	
184	16.5	16.3	16.4 ✓		1947	18.0	17.7	17.8 ✓	
185	17.6	17.8	17.7 ✓		1948	18.6	18.6	18.5 ✓	
186	17.5	17.8	17.7 ✓		1949	18.2	18.1	18.2 ✓	
187	17.7	17.8	17.8 ✓						
188	17.0	16.3	16.7 ✓						

*mf

Square 6

207	18.2	17.9	18.1 ✓
208	17.9	17.8	17.8 ✓
209	18.6	18.7	18.6 ✓
210	18.0	17.9	17.9 ✓
211	18.1	18.2	18.2 ✓
212	.	m g	
213	15.4	15.0	15.2 ✓
214	18.6	18.6	18.6 ✓
215	16.4 16.5	15.8 15.9	16.1 ✓
216	15.6	15.6	15.6 ✓
217	17.0 17.5	16.9 17.5	16.9 ✓ 17.5 ✓
218	17.8	17.2	17.4 ✓
219	17.6	17.5	17.6 ✓
220	17.5	17.6	17.5 ✓
221	16.4	16.0	16.2 ✓
222	18.7 17.8	18.9 17.7	18.8 ✓ 17.9 ✓
223	18.2	17.7	17.9 ✓
224	18.6	18.5	18.6 ✓
225	18.4	18.0	18.2 ✓
226	18.4	18.2	18.3 ✓
227	17.8	17.5	17.7 ✓
228	17.5 18.3	17.5 18.3	17.5 ✓ 18.3 ✓
229	18.5	17.9	18.2 ✓
230	18.6	18.5	18.6 ✓

231	18.7		neb?
232	16.6	17.0	16.8 ✓
233	17.6	17.8	17.7 ✓
234	16.8	17.1	16.9 ✓
235	17.7	17.8	17.7 ✓
236	16.7	16.2	16.7 ✓
237	18.6	18.6	18.6 ✓
238	18.8	18.6	18.7 ✓
239	17.0 16.8	17.1 17.3	17.0 ✓
240	18.2	17.8	18.0 ✓
241	16.4	16.2	16.3 ✓
242	18.1	17.9	18.0 ✓
243	18.3	18.1	18.2 ✓
244	18.0	17.8	17.9 ✓
245	18.6	18.6	18.6 ✓
246 246	17.6	17.8	17.7 ✓
1950	18.7	18.6	18.6 ✓
1951	18.3	18.5	18.4 ✓
1952	18.5	18.6	18.5 ✓
1953	18.8	18.7	18.8 ✓
1954	18.7	18.7	18.7 ✓
1955	18.5	18.6	18.5 ✓
1956	18.4	18.6	18.5 ✓
1957	18.6	18.6	18.6 ✓
1958	18.0 18.0	18.3 18.0	18.2 ✓

FW neb?

1959 18.2 18.5 18.4 ✓
 1960 17.4 17.6 17.5 ✓
 17.3 17.8

square 7

246 17.6

247 18.7 18.5 18.6 ✓

248 15.0 15.3 15.2 ✓

249 18.7 18.6 18.7 ✓

250 16.3 16.2 16.2 ✓

251 17.5 17.5 17.5 ✓

252 18.2 17.8 18.0 ✓

253 18.6 18.3 18.4 ✓

254 17.5 17.6 17.5 ✓

255 18.6 18.4 18.5 ✓

256 18.8 18.7 18.8 ✓

257 17.0 17.0 17.0 ✓

258 18.5 18.5 18.5 ✓

259 18.6 18.6 18.6 ✓

260 18.4 18.0 18.2 ✓

261 18.7 18.9 18.8 ✓

262 17.4 17.5 17.5 ✓

263 18.5 18.1 18.3 ✓

264 18.5 18.4 18.4 ✓

265 18.8 18.9 18.9 ✓

266 17.4 17.6 17.5 ✓

267 18.6 18.3 18.4 ✓

268 17.3 17.4 17.3 ✓

269 17.8 17.7 17.8 ✓

270 17.4 17.5 17.5 ✓

271 18.2 18.1 18.2 ✓
 18.5 17.9

272 18.8 18.9 18.8 ✓

273 18.3 18.2 18.3 ✓

274 18.7 18.9 18.8 ✓

275 18.6 18.5 18.6 ✓

276 16.5 16.8 16.7 ✓

277 16.2 16.0 16.1 ✓

278 15.9 16.2 16.0 ✓

279 15.0 15.0 15.0 ✓

280 17.3 17.2 17.3 ✓

281 18.4 18.3 18.4 ✓

282 18.1 17.8 17.9 ✓

283 18.5 18.5 18.4 ✓
 18.5 18.0

284 17.3 17.3 17.3 ✓

285 18.7 18.7 18.7 ✓

286 17.1 17.2 17.1 ✓

287 18.6 18.3 18.4 ✓

288 16.2 15.8 16.0 ✓

289 18.4 18.0 18.2 ✓

290 18.8

291 18.3 18.1 18.2 ✓

292 18.2 18.2 18.2 ✓

neb?

neb?

* p⁵p

Spine on
edge

neb?

293	18.0	17.7	17.9 ✓	319	18.6	18.7	neb?
294	18.5	18.1	18.3 ✓	320	18.0	18.2	18.1 ✓ Spiral on Edge
295	18.4	18.7	18.6 ✓	321	18.8	18.8	18.8 ✓
296	18.3	18.2	18.3 ✓	322	18.1	17.7	17.9 ✓
297	18.4	18.4	18.4 ✓	323	16.5	16.7	16.6 ✓
298	15.7	15.8	15.8 ✓	324	18.5	18.1	18.3 ✓
299	16.8	16.7	16.7 ✓	325	17.3	17.2	17.3 ✓
300	16.4	16.6	16.5 ✓	326	18.8	18.5	18.6 ✓
301	16.1	16.1	16.1 ✓	327	18.2 18.7	18.0	18.1 ✓ neb?
302	18.7	18.5	18.6 ✓	328	18.4	18.7	18.5 ✓
303	18.1	17.9	18.0 ✓	329	17.5	17.8	17.6 ✓
304	18.7	18.7	18.7 ✓	330	15.0 J15.0	15.1 15.3	15.0 ✓
305	18.0	17.8	17.9 ✓	331	15.9	15.9	15.9 ✓
307	18.4	18.1	18.2 ✓	332	18.1 18.1	17.7 17.6	17.9 ✓ neb?
308	18.8	18.9	18.9 ✓	333	18.7	18.5	18.6 ✓
309	18.4	18.6	18.5 ✓	334	17.2	17.3	17.3 ✓
310	18.6	18.7	18.6 ✓	335	18.3	18.1	18.2 ✓
311	18.6	18.5	18.5 ✓	336	18.8	18.4	18.6 ✓
312	18.7	18.8	18.8 ✓	337	15.0	15.5	15.3 ✓
313	18.4	18.7	18.5 ✓	338	18.6	18.5	18.6 ✓
314	17.7	17.7	17.7 ✓	339	16.5	16.5	16.5 ✓
315	18.9	18.9	18.9 ✓	340	17.7	17.7	17.7 ✓
316	18.7	18.8	18.8 ✓	341	17.9	17.8	17.9 ✓
317	18.2	18.1	18.1 ✓	342	16.4	16.4	16.4 ✓
318	18.7	18.6	18.6 ✓	343	18.8	18.9	18.8 ✓

344	18.9	18.9	18.9 ✓		360	17.7	17.7	17.7	FWW neb?
345	15.2	15.0	15.1 ✓		361	17.8	17.4	17.6 ✓	
346	18.8	18.9	18.9 ✓		362	18.5	18.6	18.5 ✓	
347	18.2	18.1	18.2 ✓		363	18.7	18.9	18.8 ✓	
348	18.5	18.5	18.5 ✓		364	15.8	15.8	15.8 ✓	Spinal on Edge 364, 368, 368a are triplets ✓
349	18.4	18.5	18.5 ✓		365	18.3	18.0	18.2 ✓	
350	18.9	18.9	18.9 ✓		366	18.4	18.5	18.5 ✓	
351	18.9	18.9	18.9 ✓		367	15.5	15.6	15.6 ✓	FSD? ✓
352	18.3	18.3	18.3 ✓		368	15.0	15.0	15.0 ✓	
353	15.6	15.7	15.7 ✓		368a	18.5	18.6	18.6 ✓	
354	16.2	16.2	16.2 ✓		369	18.8	18.8	18.8 ✓	
355	17.3	17.3	17.3 ✓		370	18.4	18.5	18.5 ✓	
1957	18.3			neb?	371	17.5	17.4	17.4 ✓	
1962	15.0	15.0	15.0 ✓		372	18.3	18.6	18.5 ✓	
1963	16.0	15.9	16.0 ✓		373	15.0	15.0	15.0 ✓	Spinal ✓
1964	18.6			neb?	374	18.6	18.9	18.8 ✓	
1965	18.7	18.9	18.8 ✓		375	17.7	17.5	17.6 ✓	
1966	18.6	18.6	18.6 ✓		376	17.9	17.9	17.9 ✓	
1967	18.4	18.5	18.5 ✓		377	18.7	18.9	18.8 ✓	neb?
1968	17.9	17.7	17.8 ✓		378	18.6	18.7	18.7 ✓	
Square 8					379	18.7	18.4	18.6 ✓	*atlsP
396	18.3	18.5	18.4 ✓		380	18.4	18.2	18.3 ✓	
357				ng	381	18.0	17.8	17.9 ✓	
358	18.9	18.9	18.9 ✓	FWW neb?	382	18.4	18.3	18.3 ✓	
359	18.5	18.4	18.4 ✓		383	18.5	18.4	18.5 ✓	
					384	16.4	16.5	16.4 ✓	

385	18.0	18.1	18.1 ✓		410	17.2	17.1	17.2 ✓	
386	18.8	18.9	18.8 ✓		411	18.6	18.6	18.6 ✓	neb? ✓
387	17.5	17.6	17.5 ✓		412	16.6	16.6	16.6 ✓	
388	18.2	17.8	18.0 ✓		413	18.7	18.8	18.7 ✓	
389	18.6	18.6	18.6 ✓		414	17.8	17.8	17.8 ✓	
390	18.5	18.1	18.3 ✓		415	17.4	17.6	17.5 ✓	
391	18.7	18.6	18.6 ✓		416	18.8			neb? ✓
392	17.9	18.1	18.0 ✓		417	18.6	18.5	18.6 ✓	
393	18.7	18.8	18.7 ✓		418	18.6	18.7	18.7 ✓	
394	18.8	18.9	18.8 ✓		419		ng		
395	18.5	18.5	18.5 ✓	neb? ✓	420	18.7	18.9	18.8	neb? ✓
396	18.6	18.4	18.5 ✓		421	17.9	17.9	17.9 ✓	
397	18.0	17.7	17.9 ✓		422	18.6	18.8	18.7 ✓	
398	17.4	17.5	17.4 ✓		423	17.6	17.6	17.6 ✓	
399	17.6	17.7	17.7 ✓		424	18.8	18.9	18.8 ✓	neb? ✓
400	18.8	18.9	18.8 ✓	neb? ✓	425	16.7	16.6	16.7 ✓	
401	18.1	18.5	18.3 ✓		426	17.6	17.7	17.6 ✓	
402	18.6	18.7	18.7 ✓		427	16.7	17.1	16.9 ✓	
403	18.5	18.7	18.6 ✓		428	18.1	18.4	18.3 ✓	
404	18.8	18.9	18.8 ✓		429	18.0	17.6	17.8 ✓	
405	17.9			neb? ✓	430	17.6	17.7	17.6 ✓	
406	18.6	18.5	18.5 ✓		431	18.1	18.0	18.1 ✓	
407	18.5	18.5	18.5 ✓		432	18.6	18.7	18.6 ✓	neb? ✓
408	17.0	17.2	17.1 ✓		433	17.2	17.6	17.4 ✓	
409	17.7	17.7	17.7 ✓		434	18.1	17.8	17.9 ✓	

435	18.6	18.7	18.6 ✓		460	18.6	18.7	18.6 ✓
436	17.7	17.5	17.6 ✓		461	17.3	17.3	17.3 ✓
437	17.6	17.5	17.6 ✓		462	17.1	17.4	17.3 ✓
438	18.8	18.9	18.9 ✓		463	18.4	18.4	18.4 ✓
439	18.4	18.5	18.4 ✓		464	18.8	18.9	18.8 ✓
440	18.5	18.4	18.5 ✓		465	17.7	17.7	17.7 ✓
441		~g			466	17.5 17.0	17.1 17.5	17.3 ✓
442	18.4	18.1	18.2 ✓	neb?	467	18.0	17.8	17.9 ✓
443	18.1	17.8	17.9 ✓		468	16.7	16.7	16.7 ✓
444		~g			469	16.5	16.2	16.3 ✓
445	17.9	17.9	17.9 ✓		470	17.5	17.4	17.4 ✓
446	17.8	17.6	17.7 ✓		471	16.7	16.6	16.7 ✓
447	18.6	18.6	18.6 ✓		1917	18.7	18.7	18.7 ✓
448	17.6	17.7	17.6 ✓		1969	18.7	18.7	18.7 ✓
449	17.4	17.6	17.5 ✓		1970	18.5	18.5	18.5 ✓ neb?
450	17.9	18.1	18.0 ✓		1971	18.3	18.4	18.4 ✓
451	16.2 15.5	16.0 16.0	15.9 ✓	Spine ✓	1972	18.4	18.4	18.4 ✓
452	18.7	18.9	18.8 ✓		1973	18.8	18.7	18.7 ✓
453	17.3	17.4	17.3 ✓		1974	18.8	18.9	18.8 ✓
454					1975	18.7	18.7	18.7 ✓ fww neb?
455	18.4	18.6	18.5 ✓		1976	18.5	18.5	18.5 ✓
456	18.1	17.8	18.0 ✓		Square 9			
457	17.8	18.0	17.9 ✓		472	17.4	17.3	17.3 ✓
458	115.0	115.0	115.0 ✓		473	18.3	18.0	18.2 ✓
459	18.8	18.9	18.8	fww neb?	474	17.7	17.8	17.7 ✓

475	17.6	17.9	17.8 ✓	500	17.4	17.4	17.4 ✓
476	18.6	18.5	18.5 ✓	501	18.7	18.5	18.6 ✓
477	18.7	18.4	18.6 ✓	502	18.6	18.6	18.6 ✓
478	18.3	18.3	18.3 ✓	503	17.3	17.1	17.2 ✓
479	17.4	17.3	17.3 ✓	504	18.6	18.6	18.6 ✓
480	18.1	17.8	18.0 ✓	505	.	~ 2	
481	18.8	18.7	18.7 ✓	506	17.3	17.3	17.3 ✓
482	~ 17.4	17.4	17.4 ✓	507	15.7	16.0	15.9 ✓
483	17.5	17.4	17.4 ✓	508	17.1	17.5	17.3 ✓
484	18.8	18.7	18.7 ✓	509	18.1	17.8	18.0 ✓
485				510	18.3	18.0	18.1 ✓
486	18.2 18.4	18.3 17.8	18.2 ✓	511	18.7	18.8	18.8 ✓
487	18.6	18.2	18.4 ✓	512	15.6	16.0	15.8 ✓
488	17.8	17.8	17.8 ✓	513	17.9	17.8	17.9 ✓
489	16.6 16.6	16.4 16.0	16.4 ✓	514	18.8	18.8	18.8 ✓
490	16.4	16.3	16.4 ✓	515	15.8	16.0	15.9 ✓
491	16.2	16.3	16.3 ✓	516	J 15.0	J 15.0	J 15.0 ✓
492	18.7	18.5	18.6 ✓	517	17.3	17.4	17.4 ✓
493	15.4	15.1	15.2 ✓	518	16.4	16.7	16.5 ✓
494	17.7	17.7	17.7 ✓	519	17.9	17.6	17.8 ✓
495	18.7	18.6	18.7 ✓	520	J 15.0	J 15.0	J 15.0 ✓
496	18.4	18.6	18.5 ✓	521	16.7	17.1	16.9 ✓
497	18.6	18.8	18.7 ✓	522	17.3	17.2	17.3 ✓
498	18.3	18.5	18.4 ✓	523	17.4	17.5	17.4 ✓
499	18.5	18.6	18.6 ✓	524	16.5	16.5	16.5 ✓

FSB? ✓

mb?

spiral on
edge

FSB? ✓

} pair

525	18.6	18.6	18.6	550	17.8	17.8	17.8 ✓
526	18.5 18.5	18.2 17.9	18.3 ✓	551	18.6	18.4	18.5 ✓
527	17.9	17.7	17.8 ✓	552	18.7	18.5	18.6 ✓
528	18.7	18.5	18.6 ✓	553	16.8	16.1	17.0 ✓
529	17.5	17.5	17.5 ✓	554	18.5	18.4	18.4 ✓
530	17.4	17.4	17.4 ✓	555	17.5	17.9	17.7 ✓
531	17.2	17.5	17.3 ✓	556	16.4	16.7	16.5 ✓
532	16.9 16.9	17.4 17.4	17.4 ² ✓	1977	18.3	17.9	18.1 ✓
533	18.8	18.8	18.8 ✓	1978	17.3	17.6	17.4 ✓
534	18.7	18.9	18.8 ✓	1979	18.8	18.9	18.9 ✓ FWW neb? ✓
535	18.3	18.5	18.4 ✓	1980	18.3	17.9	18.1 ✓ FWW neb? ✓
536	18.8	18.9	18.8 ✓	1981	18.2	17.9	18.0 ✓
537	17.9	17.7	17.8 ✓	1982	18.6	18.5	18.5 ✓
538	18.2	18.0	18.1 ✓	1983	18.8	18.7	18.8 ✓
539	17.3	17.3	17.3 ✓	1984	17.0	17.4	17.2 ✓ best * n p
540	18.4	18.3	18.3 ✓	1985	18.6	.	neb? ✓
541	18.2	17.8	18.0 ✓	1986	18.8	18.9	18.9 ✓
542	15.2	15.3	15.2 ✓	1987	17.7	17.7	17.7 ✓
543	17.4	17.3	17.3 ✓	1988	18.4	18.1	18.2 ✓
544	16.7	16.8	16.8 ✓	1989	18.6	18.7	18.7 ✓
545	18.8	18.9	18.9 ✓	1990	18.4	18.5	18.4 ✓
546	18.2	17.9	18.0 ✓	Square 10			
547	18.0	17.9	17.9 ✓	557	16.7	17.0	16.9 ✓
548	17.5	17.8	17.6 ✓	558	18.8	18.7	18.8 ✓
549	17.9	18.0	17.9 ✓	559	17.2	17.1	17.1 ✓

560	18.4	18.1	18.2	neb?	585	16.7	16.4	16.6 ✓
561	18.2 18.3	17.8 17.7	18.0 ✓		586	17.7	17.6	17.7 ✓
562	18.4 18.4	18.3 17.8	18.2 ✓		587	18.0	18.0	18.0 ✓
563	17.3	17.5	17.4 ✓		588	16.9	16.5	16.7 ✓
564	18.6	18.3	18.5 ✓		589	17.8	17.4	17.6 ✓
565	18.7	18.5	18.6 ✓		590	16.7	16.4	16.6 ✓
566	16.6	16.4	16.5 ✓		591	17.3	17.3	17.3 ✓
567	18.1	18.2	18.2 ✓		592	17.2	17.1	17.1 ✓
568	18.5	18.3	18.3 ✓		593	18.6	18.3	18.4 ✓
569	17.0	17.3	17.1 ✓		594	17.6	17.9	17.7 ✓
570	17.5	17.8	17.6 ✓		595	17.7	17.8	17.8 ✓
571	17.4	17.6	17.5 ✓		596	17.8	17.7	17.7 ✓
572	18.4	18.3	18.3 ✓		597	16.7 16.8	16.2 16.0	16.4 ✓
573	15.3	15.4	15.4 ✓	Spiral on Edge	598	17.6	17.4	17.5 ✓
574	18.3	18.6	18.5 ✓	neb?	599	17.7	17.9	17.8 ✓
575	16.9	16.7	16.8 ✓		600	16.4	16.5	16.4 ✓
576	ng				601	15.0	15.0	15.0 ✓
577	18.7	18.6	18.6 ✓		602	ng		
578	18.4	18.1	18.3 ✓		603	16.3	16.3	16.3 ✓
579	16.5	16.4	16.5 ✓		1991	17.7	17.7	17.7 ✓
580	18.3 18.8	18.1 18.2	18.4 ✓	neb?	1992	16.7	16.8	16.7 ✓
581	17.0	16.8	16.9 ✓		1993	18.3	18.0	18.2 ✓
582	17.8	17.6	17.7 ✓		1994	18.4	18.1	18.3 ✓
583	16.9	17.1	17.0 ✓		1995	18.2	17.8	18.0 ✓
584	18.1	17.9	18.0 ✓		1996	17.8	17.9	17.8 ✓

neb?

neb?

1991	18.3	18.0	18.1 ✓
1998	18.0	18.1	18.0 ✓
1999	17.8	17.9	17.9 ✓
2000	18.4	18.1	18.2 ✓

neb?

624	17.7	17.6	17.7 ✓
625	18.1	18.2	18.1 ✓
626	17.1	17.0	17.0 ✓

Square 11

628	15.3	15.7	15.5 ✓
629	15.2	15.8	15.5 ✓

Spiral on
Edge

604	16.9	16.8	16.9 ✓
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605	18.5	18.6	18.6 ✓
-----	------	------	--------

neb?

606	15.0	15.0	15.0 ✓
-----	------	------	--------

607	17.7	17.7	17.6 ✓
	17.3	17.8	

608	15.0	15.0	15.0 ✓
-----	------	------	--------

609	15.3	15.5	15.4 ✓
-----	------	------	--------

610	17.1	17.4	17.3 ✓
-----	------	------	--------

611	16.7	16.1	16.4 ✓
	16.7	16.0	

612	17.9	17.6	17.8 ✓
-----	------	------	--------

613	18.6	18.8	18.7 ✓
-----	------	------	--------

638	18.7	18.5	18.6 ✓
-----	------	------	--------

614	18.4	18.6	18.5 ✓
-----	------	------	--------

FWW neb?
obj. PS

639	18.7	18.4	18.5 ✓
-----	------	------	--------

615	17.6	17.6	17.6 ✓
-----	------	------	--------

640	18.4	18.1	18.2 ✓
-----	------	------	--------

616	18.1	18.5	18.3 ✓
-----	------	------	--------

FWW neb?

641	16.9	17.1	17.0 ✓
-----	------	------	--------

617	18.0	18.0	18.0 ✓
-----	------	------	--------

642	18.7	18.4	18.5 ✓
-----	------	------	--------

618	17.1	17.3	17.3 ✓
-----	------	------	--------

643	18.3	18.2	18.2 ✓
-----	------	------	--------

619	18.5	18.7	18.6 ✓
-----	------	------	--------

644	16.4	16.7	16.5 ✓
-----	------	------	--------

620	18.6	18.7	18.7 ✓
-----	------	------	--------

645	18.7	18.9	18.8 ✓
-----	------	------	--------

FWW neb?

621	17.6	17.7	17.6 ✓
-----	------	------	--------

646	18.0	18.0	18.0 ✓
-----	------	------	--------

622	17.2	17.5	17.3 ✓
-----	------	------	--------

647	17.6	17.8	17.7 ✓
-----	------	------	--------

623	18.2	18.3	18.2 ✓
-----	------	------	--------

648	18.0	17.8	17.9 ✓
-----	------	------	--------

649	18.5	18.3	18.4		674		8.9	
					674		8.6	
650	18.0	17.9	18.0		675		8.9	
					675		8.7	
651	18.7	18.7	18.7	neb?	676		8.6	
					676		8.8	
652	18.5	18.2	18.3		677		7.5	
					677		8.6	
653	18.8	18.7	18.8		678		6.9	
					678		8.7	
654	18.6	18.2	18.4		679		8.7	
655	18.5	18.1	18.3		680		7.5	
656	18.7	18.6	18.7		681		8.4	
657	18.4	18.4	18.4		682		8.5	
658	17.7	17.8	17.8		683		8.4	
659	17.2	17.5	17.3		684		8.3	
660	18.6	18.2	18.4		685		7.8	
660W	17.7	17.8	17.8					
661	17.3	17.4	17.4		686	17.2	17.4	17.3
662	16.7	17.1	16.9		687	18.4	18.6	18.5
663	18.7	18.7	18.7		688	18.8	18.9	18.8
								neb?
664	18.8	18.8	18.8		689	17.0	17.3	17.1
665	17.3	17.6	17.5		690	18.7	18.6	18.6
666	16.9	17.2	17.0		691	18.4	18.2	18.3
667	17.2	17.6	17.2		2001	18.6	18.6	18.6
667	16.8	17.3	17.2					
668	18.8	18.8	18.8		2002	18.4	18.6	18.5
669	17.6	17.6	17.6			18.2	17.9	18.0
					2003	18.3	17.6	18.0
670	17.3	17.1	17.2		2004	18.4	18.2	18.3
670W	18.7	18.8	18.7	neb?				
671	17.9	17.8	17.8		2005	18.3	18.1	18.2
671W	17.8	17.7	17.7					
672	17.0	17.3	17.2		2006	18.5	18.6	18.5
672W	18.2	18.0	18.1	off. P				
673	18.5	18.1	18.3		2007	18.4	18.1	18.2
673W	18.1	17.8	17.9					

649	18.5	18.3	18.4 ✓		674	18.8	18.9	18.9 ✓
650	18.0	17.9	18.0 ✓		674a	18.6	18.6	18.6 ✓
651	18.7	18.7	18.7 ✓	neb? ✓	675	18.9	18.8	18.9 ✓
652	18.5	18.2	18.3 ✓		675a	18.7	18.7	18.7 ✓
653	18.8	18.7	18.8 ✓		676	18.6	18.6	18.6 ✓
654	18.6	18.2	18.4 ✓		676a	18.8	18.7	18.8 ✓
655	18.5	18.1	18.3 ✓		677	17.5	17.4	17.5 ✓
656	18.7	18.6	18.7 ✓		677a	18.6	18.7	18.6 ✓
657	18.4	18.4	18.4 ✓		678	16.9	16.8	16.9 ✓
658	17.7	17.8	17.8 ✓		678a	18.6	18.8	18.7 ✓
659	17.2	17.5	17.3 ✓		679	18.7	18.7	18.7 ✓
660	18.6	18.2	18.4 ✓		680	17.6	17.4	17.5 ✓
660a	17.7	17.8	17.8 ✓		681	18.3	18.6	18.4 ✓
661	17.3	17.4	17.4 ✓		682	18.4	18.5	18.5 ✓
662	16.7	17.1	16.9 ✓		683	18.6	18.3	18.4 ✓
663	18.7	18.7	18.7 ✓		684	18.3	18.2	18.3 ✓
664	18.8	18.8	18.8 ✓		685	17.9	17.7	17.8 ✓
665	17.3	17.6	17.5 ✓		686	17.2	17.4	17.3 ✓
666	16.9	17.2	17.0 ✓		687	18.4	18.6	18.5 ✓
667	17.2 16.8	17.6 17.3	17.2 ✓		688	18.8	18.9	18.8 ✓
668	18.8	18.8	18.8 ✓		689	17.0	17.3	17.1 ✓
669	17.6	17.6	17.6 ✓		690	18.7	18.6	18.6 ✓
670	17.3	17.1	17.2 ✓		691	18.4	18.2	18.3 ✓
670a	18.7	18.8	18.7 ✓		2001	18.6	18.6	18.6 ✓
671	17.9	17.8	17.8 ✓		2002	18.4	18.6	18.5 ✓
671a	17.8	17.7	17.7 ✓		2003	18.2 18.3	17.9 17.6	18.0 ✓
672	17.0	17.3	17.2 ✓		2004	18.4	18.2	18.3 ✓
672a	18.2	18.0	18.1 ✓		2005	18.3	18.1	18.2 ✓
673	18.5	18.1	18.3 ✓	obs. P	2006	18.5	18.6	18.5 ✓
673a	18.1	17.8	17.9 ✓		2007	18.4	18.1	18.2 ✓

2008	18.8	18.5	18.7 ✓		705	18.5	18.5	18.5 ✓	*ell. F. ✓
2009	18.8	18.8	18.8 ✓	neb.?	706	18.2	18.1	18.1 ✓	
2010	18.7			neb.?	707	17.7	17.8	17.8 ✓	
2011	18.5	18.3	18.4 ✓		708	18.7	18.7	18.7 ✓	
2012	17.7	17.6	17.6 ✓		709	18.6	18.7	18.7 ✓	
2013	17.4	17.4	17.4 ✓		710	18.7	18.6	18.6 ✓	
2014	17.1	17.4	17.3 ✓		711	18.1	18.2	18.1 ✓	
2015	17.4	17.4	17.4 ✓		712	18.4	18.1	18.2 ✓	
2016	18.7	18.9	18.8 ✓	FWW neb.?	713	18.8	18.7	18.7 ✓	
2017	18.6	18.6	18.6 ✓		714	18.5			neb.?
2018	18.7	18.7	18.7 ✓		715	17.4	17.4	17.4 ✓	
Square 12					716	18.1	18.3	18.2 ✓	
692	16.1	15.8	16.0 ✓		717	18.3	18.2	18.2 ✓	
693	17.3	17.2	17.3 ✓		718	18.6	18.5	18.5 ✓	
694	18.8		ng	neb.?	719	17.3	17.2	17.2 ✓	
695	18.6	18.7	18.7 ✓		720	17.9	17.8	17.9 ✓	
696	15.0	15.0	15.0 ✓		721	18.1	17.8	18.0 ✓	neb.?
697	18.7	18.6	18.6 ✓		722	17.5	17.4	17.5 ✓	
698	18.7	19.0	18.9 ✓	FWW neb.?	723	18.4	18.2	18.3 ✓	
699	15.2	15.1	15.2 ✓	Spiral on Edge ✓	724	18.1	18.1	18.1 ✓	
700	18.1	18.1	18.1 ✓		725	18.3	18.1	18.2 ✓	
701	17.6	17.3 17.2	17.3 ✓		726	17.6	17.5	17.6 ✓	
702	18.8	18.9	18.9 ✓		727	17.7	17.8	17.7 ✓	
703	18.6	18.0 18.0	18.2 ✓		728	17.2	17.3	17.2 ✓	
704			ng		729	17.3	17.7	17.5 ✓	

730	18.4	18.3	18.3 ✓	755	18.5	18.7	18.6 ✓	
731	17.2	17.4	17.3 ✓	756	18.6	18.6	18.6 ✓	
732	18.3	18.2	18.2 ✓	757	18.4	18.5	18.4 ✓	
733	18.8	18.8	18.8 ✓	758	18.6	18.6	18.6 ✓	neb? ✓
734	18.1	17.8	17.9 ✓	759	18.5	18.4	18.5 ✓	
735	17.8	17.6	17.7 ✓	760	18.7	18.7	(18.7) ✓	
736	15.0 15.0	15.1 15.3	15.1 ✓	761	17.8	17.9	(17.8) ✓	
737	18.3	18.5	18.4 ✓	762	17.7	17.4	17.6 ✓	* att sf ✓
738	18.7	18.8	18.8 ✓	763	17.6	17.5	(17.5) ✓	
739	18.6	18.7	18.7 ✓	764	18.3	18.0	18.1 ✓	
740	18.5	18.7	18.6 ✓	765	17.0	16.9	17.0 ✓	
741	18.4	18.4	18.4 ✓	766	18.6	18.5	(18.5) ✓	
742	18.7	18.8	18.8 ✓	767	18.7	.	ng	neb? ✓
743	18.6	18.5	18.5 ✓	768	18.3	17.9	18.1 ✓	
744	17.6	18.0	17.8 ✓	769	18.6	18.5	18.5 ✓	
745	18.3	18.5	18.4 ✓	770	18.8	18.9	18.8 ✓	Faint neb? ✓
746	18.8	18.6	18.7 ✓	771	18.7	18.7	18.7 ✓	
747	17.3	17.5	17.4 ✓	772	18.6	18.7	18.7 ✓	
748	17.0	17.4	17.2 ✓	773	16.3	16.5	(16.4) ✓	Spiral on ✓
749	18.6	18.6	18.6 ✓	774	17.7 18.3	17.8	17.7 ✓	Edge
750	18.3	17.9	18.1 ✓	774w	18.0	18.1	18.0 ✓	* F ✓ } pair
751	18.5	18.4	18.4 ✓	775	17.7	17.7	17.7 ✓	
752	17.4	17.4	17.4 ✓	776	18.1	18.1	18.1 ✓	neb? ✓
753	17.6	17.5	17.5 ✓	777	17.5	17.5	17.5 ✓	Spiral on ✓
754	15.2 15.2	15.8 16.2	15.6 ✓	778	18.7	18.4	18.6 ✓	Edge
				779	17.4	17.4	17.4 ✓	

780	16.9	17.1	17.0 ✓		805	18.1	17.8	17.9 ✓	
781	18.7	18.7	18.7 ✓		806	18.4	18.5	18.4 ✓	
782	17.2	17.4	17.3 ✓	(782 pair) (787)	807	18.1	18.1	18.1 ✓	
783	17.1		n g		808	18.8	18.7	18.7 ✓	
784	18.4	18.6	18.5 ✓		809	17.5	17.6	17.5 ✓	
785	18.6	18.5	18.6 ✓		810	17.9	17.8	17.8 ✓	
786	17.9	17.8	17.9 ✓		811	18.7	18.7	18.7 ✓	
787	16.6	16.7	16.7 ✓	L?	812	18.0	17.7	17.9 ✓	
788	17.3	17.1	17.2 ✓	rel?	813	18.1	17.9	18.0 ✓	
789	17.1	16.8	17.0 ✓		814	17.9	17.8	17.8 ✓	
790	18.5	18.7	18.6 ✓		815	18.8	18.7	18.7 ✓	
791	17.4	17.3	17.3 ✓	Spine to Edge	816	17.2	17.0	17.1 ✓	17.3
792	17.5	17.6	17.5 ✓		817	17.3	17.2	17.2 ✓	
793	18.3	17.9	18.1 ✓		818	18.6	18.7	18.7 ✓	
794	18.4	18.4	18.4 ✓		819	16.4	16.1	16.2 ✓	
795	18.1	17.7	17.9 ✓		820	18.6	18.8	18.7 ✓	
796	17.2	17.1	17.2 ✓		821	18.5	18.7	18.6 ✓	
797	18.5	18.4	18.5 ✓		822	16.6	16.7	16.7 ✓	L
798	16.9	17.3	17.1 ✓		823	18.4	18.4	18.4 ✓	
799	17.2	17.1	17.2 ✓		824	17.2	17.4	17.3 ✓	
800	17.7	17.6	17.7 ✓		825	18.7	18.7	18.7 ✓	rel?
801	18.1	17.9	18.0 ✓		826	18.6	18.4	18.5 ✓	
802	18.6	18.7	18.6 ✓		827	18.6	18.5	18.6 ✓	
803	17.7	17.8	17.7 ✓	rel?	828	17.3	17.3	17.3 ✓	
804	18.3	18.0	18.2 ✓		829	18.3	18.4	18.3 ✓	

830	17.7	17.5	17.6 ✓	17.4	839	16.9	17.1	17.0 ✓	FSB?
831	17.2	17.4	17.3 ✓		840	15.0	15.0	15.0 ✓	Spinal
832	17.3	17.4	17.3 ✓	17.3	841		ng		
833	18.7	18.7	18.7 ✓		842	18.1	18.3	18.2 ✓	18.1
834	18.4	18.4	18.4 ✓		843	18.0	18.0	18.0 ✓	18.1
835	17.4	17.8	17.6 ✓		844	17.7	17.5	17.6 ✓	17.9
836	17.6	17.8	17.7 ✓	18.2	845	18.1	18.0	18.0 ✓	18.1
2019	18.6	18.5	18.6 ✓		846	18.4	18.1	18.3 ✓	18.1 FWW neb?
2020	18.6	18.6	18.6	neb: ✓	847	17.4	17.1	17.2 ✓	17.7
2021	16.5	16.2	16.3 ✓		848	18.7	18.4	18.5 ✓	18.7
2022	18.5	18.3	18.4 ✓	FWW neb: ✓	849	17.4	17.2	17.3 ✓	17.6
2023	18.1	18.1	18.1 ✓	FWW neb: ✓	850	18.5	18.5	18.5 ✓	18.5
2024	18.4	18.2	18.3 ✓	FWW neb: ✓	851	17.7	17.5	17.6 ✓	* att SF
2025	18.7	18.6	18.6 ✓		852	17.6	17.7	17.6 ✓	18.0
2026	18.6	18.5	18.5 ✓		853		ng		
2027	18.8		ng	neb: ✓	854	17.1	17.2	17.1 ✓	17.3 Spinal on Edge
2028	18.4	18.4	18.4 ✓		855	17.9	17.8	17.8 ✓	17.9
2029	17.9	17.9			856	18.5	18.1	18.3 ✓	18.5
2030	18.5	18.7	18.6 ✓		857	16.5	16.8	16.7 ✓	
2031	18.4	18.5	18.4 ✓		858	18.7	18.8	18.8 ✓	18.5
2032	17.7	17.5	17.6 ✓	FWW neb: ✓	859	18.6	18.5	18.5 ✓	18.5
2033	18.8	18.6	18.7 ✓		860	18.1	18.1	18.1 ✓	18.4
Square 13					861	18.0	18.0	18.0 ✓	18.4
837	18.3	18.1	18.2 ✓	18.1 neb leg.	862	18.1	18.1	18.1 ✓	18.4
838	18.6	18.2	18.4 ✓	18.5	863	18.9	18.8	18.8 ✓	18.9 neb?

864	17.6	17.8	17.7 ✓	17.8	889	17.8	17.6	17.7 ✓	
865	18.9	18.9	18.9 ✓	18.9	890	18.7			neb?
866	18.0	17.9	18.0 ✓	18.2	891	18.0	17.7	17.9 ✓	* acc. NP
				<i>Spiral on Edge</i>	892	18.5	18.4	18.4 ✓	
867	16.4	16.4	16.4 ✓	16.5	893	17.4	17.1	17.3 ✓	17.6
868	18.1	17.9	18.0 ✓	18.0	894				
869									
870	17.6	17.6	17.5 ✓		895	18.7	18.7	18.7 ✓	18.8
871	17.7	17.8	17.8 ✓	18.0	896				
872	17.4	17.5	17.5 ✓		897	18.6	18.7	18.6 ✓	18.8
873	215.0 J15.0	215.0 15.3	215.0 ✓		898	17.9	18.1	18.0 ✓	
874	18.2	18.5		<i>Spiral on Edge</i>	899				
875	17.4	17.5	17.4 ✓						
876	J15.0	J15.0	J15.0 ✓	<i>Spiral</i>	900	18.6	18.2	18.4 ✓	18.2
877	18.7	18.9	18.8 ✓	<i>lighter off P neb?</i>	901	17.7	17.6	17.7 ✓	18.0
877a	18.3	18.0	18.1 ✓		902	18.6	18.4	18.5 ✓	
878	18.0	17.8	17.9 ✓		903	17.0	16.9	17.0 ✓	
879	18.7 18.8	18.9	18.8 ✓	neb?	904	18.2	18.3	18.2 ✓	18.2
880	17.4	17.6	17.5 ✓		905	18.7			
881	17.6	17.6	17.6 ✓		906	18.8	18.6	18.7 ✓	
882	17.5	17.5	17.5 ✓		907	17.5	17.5	17.5 ✓	
883	17.5	17.5	17.5 ✓		908	18.3	18.1	18.2 ✓	
884	18.3	18.1	18.2 ✓	18.5	909	17.1	17.4	17.3 ✓	
885	18.8	18.9	18.9 ✓	18.8	910	18.7	18.8	18.8 ✓	
886	17.8	18.0	17.9 ✓	18.0	911	17.9	17.5	17.7 ✓	
887	17.4	17.6	17.5 ✓	17.8	912	18.6	18.6	18.6 ✓	
888	17.1	17.0	17.0 ✓	17.2	913	17.8	17.4	17.6 ✓	17.9

914	16.9	17.1	17.0 ✓		920	18.5	18.2	18.3 ✓	
9034	18.6	18.5	18.5 ✓		921	18.6	18.5	18.6 ✓	
2035	17.2	17.1	17.2 ✓		922	115.0	115.0	115.0 ✓	Spiral Edge
2036	18.9	18.9	18.9	FWW neb?	923	18.6	18.6	18.6 ✓	
2037	18.6	18.3	18.5 ✓		924	18.6 15.6	16.1 16.2	15.8 ✓	
2038	18.8	18.5	18.6 ✓		925				
2039	18.8	18.7	18.7 ✓		926	18.7	18.7	18.7 ✓	
2040	18.7	18.6	18.6 ✓		927	18.8	18.7	18.7 ✓	
2041	18.8	18.9	18.8 ✓	FWW neb?	928	17.7	17.7	17.7 ✓	Int. x att SF
2042	18.7	18.9	18.8 ✓		929	17.5	17.6	17.6 ✓	
2043	18.5	18.6	18.5 ✓		930	16.7	16.5	16.6 ✓	
2044	17.6	17.7	17.6 ✓		931	16.4	16.3	16.3 ✓	
2045	18.6	18.6	18.5 ✓	neb?	932	18.8			neb?
2046	18.5	18.4	18.4 ✓		933	18.3	17.9	18.1 ✓	
2047	18.5	18.1	18.3 ✓		934	17.4	17.4	17.4 ✓	
2048	18.6	18.5	18.5 ✓	neb?	935	18.4	18.2	18.3 ✓	
2049	18.6	18.4	18.5 ✓		936	17.7	17.7	17.7 ✓	
2050	18.5	18.1	18.3 ✓		937	16.5	16.6	16.6 ✓	
2051	18.8	18.6	18.7 ✓		938	18.1	18.0	18.1 ✓	
Square 14					939	17.2	17.2	17.2 ✓	
915	15.8	16.2	16.0 ✓		940	18.6	18.7	18.6 ✓	
916	17.4	17.1	17.2 ✓		940a	17.8	18.0	17.9 ✓	
917	18.7	18.5	18.6 ✓		941	18.4	18.2	18.3 ✓	
918	19.0	18.9	18.9 ✓		942	17.8	17.8	17.8 ✓	
919	18.6	18.5	18.6 ✓	neb?	943	17.5	17.5	17.5 ✓	
					944	17.3	17.2	17.3 ✓	

945	17.9	18.0	18.0 ✓		970	18.7	18.8	18.8	F.W.W. neb?
946	18.7	18.5	18.6 ✓	neb?	971	18.7	18.3	18.5 ✓	
947	18.6	18.4	18.5 ✓		972	18.8	18.7	18.7 ✓	
948	18.7	18.8	18.7 ✓		973	18.3	18.1	18.2 ✓	F.J.G.?
949	18.0	17.9	18.0 ✓		974	18.7	18.7	18.7 ✓	
950	17.2	17.1	17.1 ✓		975	18.0	17.8	17.9 ✓	
951	16.4	16.3	16.4 ✓		976	18.8	18.7	18.8 ✓	
952	18.7	18.8	18.7 ✓		977	16.5	16.8	16.7 ✓	
953	18.1	17.7	17.9 ✓		978	17.6	17.5	17.6 ✓	
954	18.8	18.8	18.8 ✓		979	16.3	16.6	16.5 ✓	br.* n f
955	18.6	18.6	18.6 ✓		980	17.6	17.6	17.6 ✓	
956	17.3	17.0	17.2 ✓		981	17.7	17.8	17.8 ✓	
957	18.7	18.4	18.5 ✓	neb?	982	17.6	17.5	17.5 ✓	
958	17.2	17.2	17.2 ✓		983	16.7	16.8	16.8 ✓	
959	18.5	18.5	18.5 ✓		2052	18.6	18.7	18.7 ✓	
960	17.4	17.5	17.4 ✓		2053	18.3	18.3	18.3 ✓	
961	18.4	18.1	18.3 ✓		2054	18.6			neb?
962	18.3	18.0	18.2 ✓		2055	17.6	17.3	17.4 ✓	
963	16.7	16.8	16.7 ✓		2056	18.2	18.1	18.1 ✓	
964	18.8	18.9	18.8 ✓		2057	18.8	18.7	18.8 ✓	
965	18.6	18.5	18.5 ✓		2058	18.7	18.5	18.6 ✓	
966	18.3	18.0	18.2 ✓		2059	18.3	18.1	18.2 ✓	
967	16.5	16.5	16.5 ✓		2060	18.8	18.7	18.7 ✓	
968	16.6	16.6	16.6 ✓		2061	17.7	17.6	17.6 ✓	
969	15.4	15.5	15.5 ✓						

Square 15

984	18.0 17.4	17.9 18.0	17.8 ✓		1008	17.8	17.8	17.8 ✓	
985	18.6	18.6	18.6 ✓		09	18.3	18.0	18.2 ✓	neb? ✓
986	17.6	17.4	17.5 ✓		1010	17.6	17.2	17.4 ✓	
987	17.7 18.4	18.0 17.8	18.0 ✓		11	17.3	17.3	17.3 ✓	
988	18.8			neb? ✓	12	18.6	18.6	18.6 ✓	
989	18.1 18.3	18.0 17.8	18.1 ✓		13	18.8	18.7	18.7 ✓	
990	18.3	17.9	18.1 ✓		14	17.4	17.3	17.4 ✓	
991	17.6 18.1	17.7 17.6	17.8 ✓		15	18.5	18.2	18.3 ✓	
991	17.3	17.2	17.3 ✓		16	16.9	17.1	17.0 ✓	
993	17.7	17.3	17.5 ✓	Spinal on	17	18.8	18.8	18.8 ✓	
994	17.9 18.3	17.6 17.4	17.8 ✓	Edge	18	18.7	18.7	18.7 ✓	
995	18.1	18.0	18.0 ✓	{ 994 pair 1000	19	17.0	17.3	17.2 ✓	
996	17.3	17.2	17.3 ✓		1020	15.9	15.6	15.7 ✓	
997	17.7	17.7	17.7 ✓		21	15.7	15.8	15.8 ✓	
998	18.8	18.8	18.8 ✓	neb? ✓	22	18.5	18.7	18.6 ✓	
999	17.8	17.8	17.8 ✓		23	18.6	18.3	18.5 ✓	
1000	17.7	17.5	17.6 ✓		24	18.0	17.8	17.9 ✓	
01	18.9	18.8	18.8 ✓		1025	17.5 17.6	17.3 17.1	17.4 ✓	
02	17.6	17.7	17.7 ✓		2062	18.7	18.7	18.7 ✓	
03	18.3	18.1	18.2 ✓		2063	18.8			
04	18.1	18.1	18.1 ✓		2064	18.6	18.3	18.4 ✓	
05	16.7	17.0	16.8 ✓		2065	18.7	18.3	18.5 ✓	
06	18.6	18.7	18.7 ✓		2066	18.6	18.5	18.5 ✓	
1007	17.9	17.7	17.8 ✓	FWW neb? ✓	2067	18.5	18.2	18.4 ✓	
				off P neb? ✓	2068	18.6	18.4	18.5 ✓	

2069	18.8	18.8	18.8 ✓	1047	17.7	17.6	17.6 ✓
2070	18.7	18.7	18.7 ✓	48	17.1	17.5	17.3 ✓
2071	18.8	18.7	18.7 ✓	neb? 49	17.5	17.8	17.7 ✓
Square 16				1050	17.4	17.7	17.6 ✓
1036	16.9 17.0	16.9 16.5	16.8 ✓	51	17.2	17.5	17.3 ✓
27	17.9	18.2	18.0 ✓	52	18.2	18.3	18.2 ✓ FSB?
28	18.0	18.3	18.1 ✓	53	18.5	18.6	18.6 ✓
29	16.5 16.7	16.4 16.2	16.4 ✓	54	17.8 17.5	17.6 18.1	17.8 ✓
1030	17.9 17.7	18.1 18.2	18.0 ✓	55	18.3	18.6	18.5 ✓ FWW neb?
31	18.3	18.3	18.3 ✓	56	18.6	18.8	18.7 ✓
32	17.9	18.3	18.1 ✓	57	18.2 18.0	18.2 18.5	18.2 ✓
33	16.6	16.7	16.6 ✓	58	17.7	17.7	17.7 ✓
34	17.6	17.4	17.5 ✓	59	18.3	18.5	18.4 ✓
35	17.9	17.8	17.9 ✓	1060	17.4	17.6	17.5 ✓
36	17.6	17.6	17.6 ✓	61	17.2	17.4	17.3 ✓
37	17.8	17.7	17.8 ✓	62	17.2	17.4	17.3 ✓
38	18.6	18.8	18.7 ✓	63			double *
39	18.5	18.8	18.7 ✓	64	18.4	18.5	18.4 ✓
1040	18.4	18.6	18.5 ✓	65	18.0	18.1	18.1 ✓
41	17.2	17.3	17.2 ✓	66	18.5	18.6	18.6 ✓
42	18.0	17.6	17.8 ✓	67	18.7	18.7	18.7 ✓
43	17.3	17.5	17.4 ✓	68	16.8	17.1	16.9 ✓
44	18.5	18.7	18.6 ✓	69	18.2	18.5	18.4 ✓
45	18.0	18.2	18.1 ✓	1070	18.6	18.6	18.6 ✓
1046	18.8	18.9	18.9 ✓	neb? 1071	18.5	18.7	18.6 ✓

2072	17.7 18.0	17.7 17.5	17.7 ✓	Square 17			
2073	18.1	17.8	17.9 ✓	1087	18.2	18.3	18.2 ✓
2074	18.2 18.4	17.9 17.9	18.1 ✓	88	18.1	18.1	18.1 ✓
2075	18.5	18.7	18.6 ✓	89	17.9	17.8	17.9 ✓
2076	18.6	18.8	18.7 ✓	1090	18.8	18.8	18.8 ✓
2077	18.1	17.7	17.9 ✓	91	16.8	17.0	16.9 ✓
2078	18.7	18.6	18.7 ✓	92	17.8	17.8	17.8 ✓
2079	18.1	18.2	18.2 ✓	93	18.6	18.9	18.8 ✓
1080	18.4	18.3	18.3 ✓	94	17.4	17.7	17.5 ✓
81	18.6	18.7	18.6 ✓	95	17.7	17.8	17.8 ✓
82	17.9	17.9	17.9 ✓	96	18.4	18.5	18.5 ✓
83	18.3	18.3	18.3 ✓	97	17.2	17.3	17.2 ✓
84	18.8	18.7	18.7 ✓	98	18.6	18.7	18.7 ✓
85	17.7	17.7	17.7 ✓	99	18.9	18.9	18.9 ✓
1086	17.3	17.4	17.4 ✓	1100	17.1	17.5	17.3 ✓
1918	17.9	17.7	17.8 ✓	01	18.1	17.9	18.0 ✓
2072	18.5	18.4	18.5 ✓	02	18.5	18.5	18.5 ✓
2073	18.6	18.5	18.6 ✓	03	18.0	18.3	18.2 ✓
2074	17.7	17.7	17.7 ✓	04	18.6	18.9	18.7 ✓
2075	18.7	18.8	18.7 ✓	1105	ng		
2076	18.4	18.4	18.4 ✓	06	18.2	18.2	18.2 ✓
2077	18.5	18.3	18.4 ✓	07	18.7	18.9	18.8 ✓
2078	17.6	17.4	17.5 ✓	08	18.1	18.2	18.2 ✓
2079	18.5	18.4	18.4 ✓	09	18.0	18.3	18.1
2080	18.4	18.6	18.5 ✓	1110	17.8	18.0	17.9 ✓

Spinal on
edge

F.W. neb?

neb?

F.W. neb?

1111	18.0	17.9	18.0 ✓				
1112	17.2	17.4	17.3 ✓		1137	18.1	17.9 18.0 ✓
13	18.8	19.0	18.9 ✓		38	18.0	17.8 17.9 ✓
14	18.1	17.8	17.9 ✓		39	18.5	18.5 18.5 ✓
15	18.6	18.8	18.7 ✓		1140	17.7	18.0 17.9 ✓
16	17.9	18.3	18.1 ✓		41	18.1	18.4 18.2 ✓
17	17.7 18.0	18.3 18.5	18.1 ✓		42	18.5	18.4 18.5 ✓
18	16.9	17.3	17.1 ✓		43	17.8	17.8 17.8 ✓
neb?	1157	ng			44	18.3	17.9 18.1 ✓
1120	18.6	ng		neb?	45	18.2	18.2 18.2 ✓
21	18.6	18.6	18.6 ✓		46	18.4	18.5 18.4 ✓
22	18.3	18.5	18.4 ✓		47	17.9	18.0 17.9 ✓
23	17.7	18.1		neb?	48	18.5	18.2 18.4 ✓
24	17.6	17.8	17.7 ✓		49	18.3	18.6 18.5 ✓
25	18.5	18.7	18.6 ✓		1150	18.8	18.7 18.8 ✓
26	17.5	17.6	17.5 ✓		51	18.7	18.7 18.7 ✓
27	18.1	18.3	18.2 ✓		52	15.7	16.1 15.9 ✓ 15.9 spiral ✓
28	18.4	18.8	18.6 ✓		53	15.4	15.8 15.6 ✓
29	18.7	18.9	18.8 ✓		54	115.0	115.0 115.0 ✓ 3x L
1130	17.3	17.4	17.4 ✓	Spiral on Edge	55	18.7	18.8 18.7 ✓
31	18.0	18.0	18.0 ✓		56	18.4	18.0 18.2 ✓
32	18.6	18.8	18.7 ✓		57	18.6	18.5 18.6 ✓ neb? ✓
33	17.6	17.5	17.5 ✓		58	18.1	18.3 18.2 ✓
34	17.8	17.6	17.7 ✓		59	17.9	18.1 18.0 ✓
35	18.4	18.5	18.4 ✓		1160	18.0	18.0 18.0 ✓
1136	17.8	18.0	17.9 ✓		1161	18.6	18.4 18.5 ✓

1162	17.7	17.9	17.8 ✓		1184	17.5	17.5	17.5 ✓	} pair ✓
1163			double		85	17.4	17.3	17.3 ✓	
64	18.4	18.5	18.5 ✓		1185a	17.3	17.5	17.4 ✓	* ✓ F
65	18.0	17.9	18.0 ✓		86	18.4	18.1	18.2 ✓	
66	17.7	18.1	17.9 ✓		87	18.7	18.3	18.5 ✓	
67	17.9	17.9	17.9 ✓		88	18.6	18.6	18.6 ✓	
68	17.7	17.6	17.7 ✓		89	18.7	18.7	18.7 ✓	
69	18.5	18.6	18.6 ✓		1190	18.7	18.5	18.6 ✓	
1170	18.8	18.7	18.8 ✓		91	18.6	18.5	18.5 ✓	
71	16.9	17.2	17.1 ✓		92	17.4	17.5	17.4 ✓	spiral on Edge
72	18.4	18.5	18.5 ✓		93	18.0	17.7	17.9 ✓	
73	18.6	18.9	18.8 ✓		94	18.3	18.4	18.4 ✓	bro. * & P
74	15.9	16.3	16.1 ✓		95	18.6	18.7	18.7 ✓	
75	16.4	16.5	16.5 ✓	spiral on Edge	96	18.5	18.5	18.6 ✓	
76	16.5	16.7	16.6 ✓		97	18.4	18.4	18.4 ✓	
77	18.7	18.9	18.8 ✓		98	18.5	18.4	18.4 ✓	neb? ✓
1178	17.9	17.8	17.8 ✓		1199	18.9	18.9	ng	neb? ✓
2081	18.8	18.6	18.7 ✓		1200	17.2	17.5	17.3 ✓	spiral on Edge
2082	18.0	17.8	17.9 ✓		01	18.8	18.8	18.8 ✓	
Square 18					02	18.7	18.7	18.7 ✓	
1179	17.4	17.7	17.5 ✓		03	18.1	18.2	18.2 ✓	
1180	18.8	18.7	18.8 ✓		04	18.7	18.6	18.7 ✓	
81	18.6	18.6	18.6 ✓		05	18.6	18.6	18.6 ✓	
82	15.9	16.2	16.1 ✓		86	17.1 16.8	17.1 17.3	17.1 ✓	
1183	18.4	18.5	18.4 ✓		07	18.8	18.7	18.8 ✓	
					1207	18.6			

1208	18.6	18.3	18.5 ✓		1233	17.8	18.0	17.9 ✓	
09	16.5	16.7	16.6 ✓		34	16.9 16.7	17.2 17.3	17.0 ✓	Spiral on Edge neb?
1210	18.8	18.9	18.8 ✓		35	18.1	18.0	18.1 ✓	
11	18.0	18.7	18.7 ✓	neb?	36	15.4	15.8	15.6 ✓	Spiral on Edge
12	18.9	18.9	18.9 ✓	FWW neb? Inter * SF	37	18.4	18.3	18.4 ✓	
13	16.9	17.1	17.0 ✓	Inter * SF	38	17.4	17.5	17.5 ✓	
14	17.2	17.2	17.2 ✓		39	18.3	18.2	18.2 ✓	
15	15.3	15.5	15.4 ✓	15.6	1240	18.4	18.4	18.4 ✓	
16	17.7	17.6	17.6 ✓		41	17.6	17.7	17.7 ✓	
17	18.8	18.6	18.7 ✓		42	18.7	18.5	18.6 ✓	
18	16.9	16.8	16.9 ✓		43	17.9	18.0	18.0 ✓	* SF ✓
19	17.3	17.2	17.2 ✓	* P	44	17.4	17.7	17.5 ✓	
1220	18.8	18.5	18.7 ✓		45	17.1 16.8	17.1 17.3	17.1 ✓	
21	18.1	18.0	18.0 ✓		46	16.6	17.0	16.8 ✓	
22	18.3	18.1	18.2 ✓		47	18.0	17.8	17.9 ✓	
23	18.0	18.0	18.0 ✓		48	18.6	18.5	18.6 ✓	
24	17.5	17.9	17.7 ✓		49	17.0	17.3	17.1 ✓	
25	17.5	17.8	17.7 ✓		1250	18.5	18.8	18.6 ✓	
26	16.4 16.4	16.9 17.0	16.7 ✓		1251	18.7	18.7	18.7 ✓	
27	18.3	18.2	18.2 ✓		1252	17.9	18.0	17.9 ✓	
28	17.0	17.4	17.2 ✓		53	18.8	18.9	18.8 ✓	FWW neb? ✓
29	17.4	17.7	17.5 ✓		54	18.8	18.7	18.7 ✓	
1230	18.6	18.4	18.5 ✓		55	18.3	18.4	18.4 ✓	
31	17.9	17.8	17.8 ✓		56	18.8	18.7	18.7 ✓	neb? ✓
1232	18.3	18.3	18.3 ✓	neb? ✓	1257	16.7	16.7	16.7 ✓	

1258	16.6	16.8	16.7 ✓	1283	17.0	17.4	17.2 ✓
1259	18.1	18.4	18.2 ✓	1284	18.1	ng	neb?
1260	16.7	16.9	16.8 ✓	85	17.5	17.5	17.5 ✓
61	16.5	16.7	16.6 ✓	86	17.2	17.6	17.4 ✓
62	18.3	18.2	18.3 ✓	87	17.8	17.8	17.8 ✓
63	18.2	18.4	18.3 ✓	88	17.5	17.8	17.6 ✓
64	ng			89	17.7	18.0	17.9 ✓
65	18.6	18.7	18.6 ✓	1290	17.9	18.3	18.1 ✓
66	18.6	18.4	18.5 ✓	91	16.8	16.9	16.9 ✓
67	17.9 18.3	17.7 17.8	17.9 ✓	92	17.5	17.5	17.5 ✓
68	17.4	17.1	17.3 ✓	93	18.9	18.9	18.9 ✓
69	17.8	17.7	17.8 ✓	94	18.1	18.4	18.2 ✓
1270	18.7	18.5	18.6 ✓	95	17.6	17.8	17.7 ✓
71	115.0	115.0	115.0 ✓	96	18.6	18.6	18.6 ✓
72	17.5	17.5	17.5 ✓	97	18.8	18.9	18.9 ✓
73	ng			98	17.8	18.0	17.9 ✓
74	18.5	18.4	18.5 ✓	99	17.0	17.4	17.2 ✓
75	17.4	17.8	17.6 ✓	1300	18.7	18.6	18.6 ✓
76	18.6	18.4	18.5 ✓	2083	17.5	17.7	17.6 ✓
77	18.4	18.5	18.4 ✓	2084	18.6	18.6	18.6 ✓
78	18.7	18.7	18.7 ✓	2085	18.2	18.6	18.4 ✓
79	18.6	18.7	18.7 ✓	2086	18.8	18.7	18.7 ✓
1280	17.6	17.7	17.6 ✓	2087	18.4	18.3	18.4 ✓
81	18.1 17.7	18.3 18.4	18.1 ✓	2088	18.6	18.4	18.5 ✓
1282	17.2	17.0	17.1 ✓	2089	18.3	18.4	18.3 ✓

Spiral on
Edge

FWWneb? ✓

neb? ✓

neb? ✓

FWWneb? ✓

2090	18.7	18.9	18.8	✓	1319	18.1	18.0	18.1	✓
2091	18.6	18.7	18.6	✓	1320	18.5	18.8	18.6	✓
2092	18.3	18.3	18.3	✓	21	15.2	15.6	15.4	✓
2093	18.6	18.3	18.5	✓	22	18.7	18.9	18.8	✓
2094	18.6	18.5	18.6	✓	23	15.0	15.0	15.0	✓
2095	18.1	18.2	18.1	✓	24	18.6	18.7	18.7	✓
Square 19					25	18.7	18.7	18.7	✓
1301	17.5	17.6	17.6	✓	26	18.3	18.5	18.4	✓
02	17.2	17.5	17.3	✓	27	.	ng		✓
03	17.4	17.6	17.5	✓	28	16.4	16.6	16.5	✓
04	17.8	17.7	17.8	✓	29	18.2	18.5	18.4	✓
05	18.6	18.8	18.7	✓	1330	18.5	18.7	18.6	✓
06	16.4	16.8	16.6	✓	31	18.9	ng		✓
07	17.5	17.8	17.7	✓	32	18.6	18.7	18.7	✓
08	17.3	17.7	17.5	✓	33	18.7	18.8	18.8	✓
09	18.3	18.5	18.4	✓	34	18.2	18.2	18.2	✓
1310	17.4	17.6	17.5	✓	35	17.4	17.6	17.5	✓
11	18.4	18.6	18.5	✓	36	17.3	17.9	17.6	✓
12	17.1	17.5	17.3	✓	37	18.3	18.5	18.4	✓
13	18.4	18.6	18.6	✓	38	18.1	18.1	18.1	✓
14	17.9	17.8	17.8	✓	39	16.0	16.5	16.1	✓
15	16.8	17.0	16.9	✓	1340	15.7	15.9	15.8	✓
16	18.3	18.6	18.5	✓	41	17.9	18.1	18.0	✓
17	18.8	18.8	18.8	✓	42	18.7	18.7	18.7	✓
1318	15.4	15.7	15.6	✓	1343	18.6	18.7	18.7	✓

neb?
but * n.p.

F w w neb?

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Spiral on
EdgeSpiral on
Edge

neb?

Spiral on
Edge

neb?

Spiral on
Edge

44	18.8	18.6	18.7		1369	18.4	18.6	18.5	
45	18.6	18.3	18.4		1370	16.6	16.8	16.7	
46	18.4	18.5	18.5		71	15.6	15.8	15.7	
47	17.8	17.6	17.7		72	17.8	17.5	17.6	
48	18.3	18.2	18.2		73	18.5	18.5	18.5	
49	18.0	17.8	17.9		74	18.3	18.4	18.3	
1350	17.0	17.4	17.2	} Pair	75	18.1	17.9	18.0	
51	17.8	18.1	17.9		76	18.4	18.1	18.2	
52	17.4	17.5	17.4		77	18.0	17.9	17.9	
53	18.6	18.6	18.6		78	18.3	18.0	18.2	
54	18.7	18.7	18.7		79	16.7	17.0	16.9	
55	18.8	18.7	18.7	neb? 1380	17.9				
56	16.7	17.1	16.9	Spiral on Edge	81	18.4	18.2	18.3	
57	17.8	17.9	17.8		82	17.6	17.8	17.7	
58	16.1	16.1	16.1	Spiral on Edge	83	15.8	15.8	15.8	
59	18.4	18.6	18.5		84	18.7	18.8	18.8	FWW neb?
1360	17.3 16.7	17.1 17.2	17.1		85	18.0	17.8	17.9	
61	17.5	17.6	17.5		86	17.4	17.5	17.5	
62	16.3	16.6	16.4		87	18.5	18.5	18.5	
63	18.6	18.7	18.7		88	18.4	18.6	18.5	
64	17.9	18.1	18.0		89	18.4	18.5	18.4	
65	17.4	17.6	17.5		1390	18.6	18.7	18.7	neb?
66	18.6	18.4	18.5		91	17.9	18.0	18.0	
67	17.5	17.8	17.6		92	18.2	18.1	18.1	
1368	18.5	18.4	18.5		1393	17.4	17.4	17.4	* att.

1394	1	ng		1416	18.6	18.8	18.7 ✓	
1395	18.6	18.5	18.6 ✓	17	18.0	17.8	17.9 ✓	
2096	18.7	18.8	18.7 ✓	18	15.6	15.6	15.6 ✓	
2097	18.6	18.6	18.6 ✓	19	17.9	18.0	17.9 ✓	
Squar 20				1420	18.2	18.1	18.2 ✓	neb?
1396	16.7	17.0	16.8 ✓	21	17.6	17.8	17.7 ✓	
97	18.6	18.2	18.4 ✓	22	17.7	17.6	17.7 ✓	
98	18.2	18.1	18.1 ✓	23	18.1	18.1	18.1 ✓	
99	18.3	18.1	18.2 ✓	24	16.4	16.2	16.3 ✓	
1400	18.6	18.7	18.6 ✓	25	18.6	18.7		neb?
	17.3	17.5	✓					
01	17.0	17.6	17.4 ✓	26	18.7	18.7	18.7	FWWneb?
02	18.5	18.2	18.3 ✓	27	15.3	15.7	15.5 ✓	
03	18.1	18.2	18.2 ✓	28	16.8	16.8	16.8 ✓	
04	17.3	17.6	17.5 ✓	29	17.7	18.0	17.8 ✓	
05	18.6	18.6	18.6 ✓	1430	18.4	18.4	18.4 ✓	
06	18.0	18.4	18.2 ✓	31	18.3	18.5	18.4 ✓	
07	18.8	18.7		neb?	32	18.5	18.4	18.5 ✓
	17.0	17.3	✓					
08	16.9	17.4	17.2 ✓	1433	17.3	17.6	17.4 ✓	
09	17.9	17.8	17.8 ✓	2098	18.6	18.7	18.7 ✓	
1410	17.1	17.4	17.3 ✓	2099	17.3	17.6	17.4 ✓	
11	18.5	18.3	18.4 ✓	2100	18.2	18.0	18.1 ✓	
12	18.4	18.6	18.5 ✓	2101	18.6	18.7	18.7	neb?
13	18.1	18.0	18.0 ✓	2102	18.8			neb?
14	175.0	175.0	175.0 ✓	L	2103	18.6	18.6	18.6 ✓
1415	17.7	17.9	17.8 ✓	2104	18.7	18.6	18.6 ✓	

Square 21

34	16.4	16.0	16.2 ✓		2105	18.2	17.8	18.0 ✓	
35	17.6	17.8	17.7 ✓		2106	18.6	18.7	18.6 ✓	
36	17.5	17.7	17.6 ✓		2107	18.7	18.6	18.7 ✓	
37	17.0	17.2	17.1 ✓		2108	17.9	17.8	17.8 ✓	
1438	.	ng			2109	18.3	18.4	18.3 ✓	
39	16.8	16.7	16.7 ✓		2110	16.4	16.1	16.2 ✓	
1440	18.5	18.7	18.6 ✓	neb?	2111	17.1	17.5	17.3 ✓	neb?
41	17.5	17.4	17.4 ✓	bro * P ✓	2112	17.2	17.6	17.4 ✓	
42	17.9	18.3	18.1 ✓		2113	17.1	17.3	17.2 ✓	
43	15.6	15.7	15.7 ✓		2114	17.8	17.8	17.8 ✓	neb?
44	18.5	18.3	18.4 ✓	neb?	2115	18.6 18.0	18.4 18.6	18.4 ✓	
45	17.5	17.5	17.5 ✓		Square 22				
46	17.0	17.0	17.0 ✓		1458	17.1	17.3	17.2 ✓	
47	16.7	17.0	16.8 ✓		59	17.7	17.5	17.6 ✓	
48	15.8	15.7	15.7 ✓	F.S.B	1460	15.6	15.8	15.7 ✓	
49	17.1	17.1	17.1 ✓		61	15.5	15.8	15.7 ✓	
1450	17.0	17.1	17.0 ✓		62	16.7 16.4	17.0 17.0	16.8 ✓	
51	16.9	17.1	17.0 ✓		63	18.6 18.1	18.7 18.3	18.6 18.3	few neb?
52	17.3	17.6	17.5 ✓		64	18.1	18.6	18.4 ✓	
53	17.9	18.5	18.2 ✓		65	17.0	17.4	17.2 ✓	
54	16.2	16.0	16.1 ✓		66	16.9	17.0	16.9 ✓	F.S.B?
55	18.0	18.5	18.2 ✓		67	18.3	18.3	18.3 ✓	
1456	18.1	18.5	18.3 ✓		68	16.6	16.4	16.5 ✓	
1457	16.4	16.3	16.3 ✓		69	15.8	16.0	15.9 ✓	
					1470	18.2	17.9	18.1 ✓	

1471	17.5	17.8	17.6 ✓		1496	17.1	17.2	17.1 ✓	
72	17.6	17.9	17.7 ✓		97	17.1	17.4	17.2 ✓	
73	18.6 18.0	18.8 18.6	18.5 ✓	} pair FSB?	98	17.3	18.6		Full neb? FSB?
74	17.6	17.6	17.6 ✓		99	18.1 17.5	18.2 18.5	18.1 ✓	
75	17.3 17.0	17.2 17.5	17.3 ✓		1000		ng		F.S.B?
76	16.2	15.8	16.0 ✓		01	17.1	17.4	17.3 ✓	
1477		ng			1502		ng		
78	17.2 17.1	17.8 17.6	17.4 ✓		03	17.3 16.9	17.7 17.6	17.4 ✓	
79	17.5	17.6	17.6 ✓		04	18.5	18.4	18.4 ✓	
1480	17.7	17.5		neb?	05	15.4 15.1	15.8 15.7	15.5 ✓	
81	18.2	18.6	18.3 ✓		1506		ng		
82	17.0	17.4	17.2 ✓		07	17.9 17.5	18.4 18.1	18.0 ✓	
83	17.7	17.7	17.7 ✓		08	18.7 18.1	18.5 18.6	18.5 ✓	
84	16.6	16.4	16.5 ✓		09	17.7	18.1	17.9 ✓	
85	16.0	16.4	16.2 ✓		1510	18.0	18.4	18.2 ✓	
86	17.1	17.5	17.3 ✓		11	15.6 15.4	15.7 16.1	15.7 ✓	
87	17.5	17.8	17.6 ✓		12	17.4 17.2	17.4 17.7	17.4 ✓	
88	17.7	18.0	17.9 ✓		13	18.5	18.7	18.6 ✓	neb?
1489		ng			14	16.4	16.0	16.2 ✓	
1490	18.2	18.0	18.1 ✓	neb?	15	18.7	18.7	18.7 ✓	
91	15.4 15.0	15.7 15.7	15.5 ✓		16	15.6	15.9	15.7 ✓	
92	17.3 16.8	17.3 17.3	17.2 ✓		17	17.6	17.8	17.7 ✓	
93	16.6	16.9	16.8 ✓		18	17.2	17.4	17.3 ✓	
94	18.2	18.2	18.2 ✓		19	18.7	18.9	18.8 ✓	
1495	18.3	18.5	18.4 ✓		1520	17.4	17.5	17.4 ✓	

116	18.4	18.5	18.5		1536	18.0	18.0	18.0	✓
117	18.3	18.4	18.4	neb?	37		n g		
2118	18.5	18.5	18.5		38	16.7	17.0	16.8	✓
2119	18.6	18.7	18.7	neb?	39	17.2	17.6	17.4	✓
2120		n g			1540	18.1 17.9	18.6 18.5	18.3	✓ neb?
2121	18.4	18.5	18.4	neb?	41	18.6	18.3	18.5	✓
2122	16.7 16.5	17.4 17.4	17.0		42	17.8	18.1	18.0	✓
2123	18.3	18.6	18.5		43	17.4	17.5	17.5	✓
2124	18.1	18.5	18.3		44	17.4	17.6	17.5	✓
Square 23					45	17.6	17.7	17.6	✓
1521	18.3	18.5	18.4	F S B?	46	17.5	17.6	17.5	✓
22	18.2	18.4	18.3	F S B?	47	18.7	18.7	18.7	✓
23	17.1	17.4	17.3	Spiral on Edges	48	18.0	18.3	18.2	✓
24	17.7	17.8	17.8		49	17.9	17.8	17.9	✓
25	15.8	15.8	15.9		1550	18.2	18.2	18.2	✓ neb?
26	17.6	17.9	17.8		51	18.5	18.6	18.6	✓
27	16.6	16.9	16.7		52	15.0 15.0	15.0 15.7	15.0	✓
28	17.5	17.7	17.6		53	18.7	18.6	18.7	✓ neb?
29	18.6	18.7	18.6	neb?	54	17.5	17.6	17.6	✓
1530	18.1	18.5	18.3		55	17.3	17.4	17.3	✓
31	16.8	17.1	16.9		56	16.5	16.8	16.6	✓ (F S B)
32	15.7	15.6	15.6		57	18.5			✓ neb?
33	18.6	18.7	18.7		58	17.0	17.4	17.2	✓
34	18.3	18.2	18.2		59	17.8	17.7	17.8	✓
1535	18.4	18.1	18.3		1560	18.0	17.8	17.9	✓

1561	17.1	17.4	17.3	✓	1586	17.4	17.3	17.3	✓
62	16.4	16.0	16.2	✓	81	17.1	17.4	17.2	few neb?
63	17.5	17.3	17.4	✓	88	15.2	15.6	15.4	✓
64	18.3				89	18.3	18.2	18.3	✓
65	17.8	17.8	17.8	✓	1590	15.7	15.9	15.8	✓
66	17.6	17.7	17.6	✓	91	16.8	16.7	16.8	✓
67	16.5	16.6	16.5	✓	92	18.1	18.5 18.6		few neb?
68	17.7	18.1	17.9	✓	93	17.4	17.5	17.4	✓
69	17.0	17.4	17.2	✓	94	18.2	18.0	18.1	✓
1570	17.6	17.8	17.7	✓	95	18.3	18.3	18.3	✓
71	16.9 16.8	17.4 17.4	17.1	✓	96	18.2	18.2	18.2	✓
72	17.0 16.9	17.4 17.4	17.2	✓	97	18.4	18.4	18.4	✓
73	15.4	15.7	15.6	✓	98	15.7	15.8	15.7	✓
74	18.1 18.1	18.6 18.6	18.4	✓	1599	18.3	17.9	18.1	✓
75	17.4	17.6	17.5	✓	N 1098	115.0	115.0	115.0	✓
76	18.2	17.9	18.1	✓	N 1099	115.0	115.0	115.0	✓
77	16.9	16.9	16.9	✓	N 1091	115.0	115.0	115.0	✓
78	17.6	17.8	17.7	✓	N 1092	115.0	115.0	115.0	✓
79	15.4	15.8	15.6	✓	2125	18.1	18.1	18.1	✓
1580	15.3	15.6	15.4	✓	2126	18.3	18.0	18.2	✓
81	15.9	15.8	15.9	✓	2127	17.9	17.9	17.9	✓
82	18.2	18.8 18.7			2128	17.8	17.8	17.8	✓
83	16.4	16.0	16.2	✓	2129	17.7	17.8	17.7	✓
84	16.8	16.6	16.7	✓	2130	17.8	17.8	17.8	✓
1585	18.5	18.6	18.6	✓	2131	17.7	17.8	17.8	✓

neb?

spiral on
edge
neb?

few neb?

spiral on
edge

L

spiral

few neb?

(FSB)

2132	18.4	18.1	18.3 ✓	1617	18.0	17.9	18.0 ✓	
2133	18.1	18.1	18.1 ✓	18	17.0	17.3	17.1 ✓	Spiral on Edge
2134	18.3	18.2	18.2 ✓	17	17.9	17.8	17.8 ✓	
2135	17.2	17.5	17.3 ✓	1620	17.6	17.6	17.6 ✓	
2136	18.0	18.1	18.0 ✓	21	17.7	17.8	17.7 ✓	
2137	18.2 17.8	18.3 18.3	18.2 ✓	22	17.3	17.3	17.3 ✓	
2138	17.6	17.9	17.7 ✓	23	17.1	16.8	17.0 ✓	
Square 24				1624	18.6			neb?
1600	18.5			neb?	25	17.2	17.0	17.1 ✓
01	18.6	18.6	18.6 ✓	26	18.3	18.7	18.5 ✓	
02	16.7	16.7	16.7 ✓	27	17.6	17.8	17.7 ✓	
03	17.4	17.5	17.4 ✓	28	17.7	17.6	17.7 ✓	
04	16.0	16.2	16.1 ✓	1629	17.6	17.8	17.7 ✓	
05	18.0	18.4	18.2 ✓	1630	16.9	17.3	17.1 ✓	
06	17.7	17.9	17.8 ✓	31	17.3	17.7	17.5 ✓	neb?
07	17.2	17.4	17.3 ✓	32	18.1	18.1	18.1 ✓	obj. p
08	17.9	18.1	18.0 ✓	33	17.0	17.2	17.2 ✓	
09	18.2	18.5	18.3 ✓	34	18.2	18.3	18.2 ✓	
1610	16.7	17.1	16.9 ✓	35	18.0	18.1	18.1 ✓	
11	18.4	18.3	18.4 ✓	36				Star
12	18.3	18.5	18.4 ✓	37	17.8	18.5		Fwd neb?
13	18.5 18.2	18.6 18.7	18.5 ✓	38	17.8 17.4	18.2 18.0	17.9 ✓	
14	16.6 16.3	17.0 16.9	16.7 ✓	39	18.3	18.5	18.4 ✓	
15	115.0	115.0	115.0 ✓	1640	17.6	17.5	17.6 ✓	Fwd neb?
1616	17.8	17.9	17.9 ✓	1641	18.4	18.8	18.8 ✓	

1642	17.6 16.9	17.7 17.7	17.5 ✓	2145	18.7		neb?
1643	18.5	18.1	18.3 ✓	2146	18.3	18.1	18.2 ✓
1644	16.6	16.7	16.7 ✓	2147	18.1	17.9	18.0 ✓
1645	16.9 16.7	17.3 17.2	17.0 ✓	2148	18.7	18.6	18.6 ✓
1646	16.9	17.3	17.1 ✓	Square 25			
1647	17.5 17.2	17.7 17.9	17.6 ✓	1660	17.6	17.8	17.7 ✓
1648	17.6 17.2	17.7 18.0	17.6 ✓	61	18.2	18.9	18.5 ✓
1649	17.7	18.1	17.9 ✓	62	17.3	17.7	17.5 ✓
1650	18.1	18.5	18.3 ✓	63	16.2	15.8	16.0 ✓
1651	18.4 18.0	18.5 18.5	18.4 ✓	64	17.1	17.6	17.4 ✓
1652	18.6	18.7	18.6 ✓	65	18.0	18.5	18.3 Fw neb?
1653	18.8	18.9	18.9 ✓	66	18.3	18.6	18.4 ✓
1654	17.6	17.6	17.6 ✓	67		ng	
1655	17.4	17.6	17.5 ✓	68	17.6	17.6	17.6 ✓
1656	17.3	17.5	17.4 ✓	69	16.7	16.7	16.7 ✓
1657	17.6	17.8	17.7 ✓	1670	18.5	18.6	18.5 ✓
1658	18.8	18.7	18.8 ✓	Fw neb? 71	18.0	18.5	18.2 ✓
1659	17.3	17.7	17.5 ✓	72	17.4	17.2	17.3 ✓
N 1000	J 15.0	J 15.0	J 15.0 ✓	73	18.2	18.5	18.3 ✓
2139	18.4	18.6	18.5 ✓	74	17.0	16.5	16.8 ✓
2140	17.3 17.2	17.9 17.7	17.5 ✓	75	17.5	17.5	17.5 ✓
2141	18.6	18.9	18.7 ✓	76	18.8	18.8	18.8 ✓
2142		ng		77	17.7 17.3	17.8 18.1	17.7 ✓
2143	17.7	17.6	17.6 ✓	78	17.5	17.9	17.7 ✓
2144	18.4	18.7	18.5 ✓	Fw neb? 1678	17.2	17.6	17.4 ✓

680	17.6 17.0	17.7 17.6	17.5 ✓	
81	18.2	18.2	18.2 ✓	
1682				
83	16.0	16.0	16.0 ✓	Spinal on Edge
84	18.6	18.2	18.4 ✓	
85	18.3	18.1	18.2 ✓	
86	18.4	18.0	18.2 ✓	
87	17.9	18.0	17.9 ✓	
88	16.5	16.4	16.4 ✓	L
89	17.0	17.4	17.2 ✓	
1690	15.4 15.8	15.0 15.6	15.3 ✓	
1690w	16.1	16.2	16.1 ✓	
91	17.9	17.7	17.8 ✓	
92	115.0	115.0	115.0 ✓	
93	16.6	16.2	16.2 ✓	
1694	16.5	16.2	16.3 ✓	* att. SF
2149				
2150	18.1			neb?
2150	18.1	18.5	18.3 ✓	neb?

Outs not in yet.

7% of diff were 1.4 or .7

A 15781

*Counted stars have circles*14.6

R. A. P.

14.8

R. A. P.

15.0

15.3

15.4

R. A. P.

15.7

16.0

16.0

R. A. P.

16.1

16.2

16.4

R. A. P.

16.7

16.9

R. A. P.

17.1

17.4

R. A. P.

17.7

18.0

W. A. J.?

Interpolations made by F. W. W.

A 15781

23 20 0° 0

Square 1

C.D.B.

FWW

34	16.3	16.0	16.2	66	16.4 16.7	16.2 16.2	16.4 ✓
35	15.0	15.0	15.0	67	15.6 15.6	16.3 15.0	15.4 ✓
41	17.1	16.8	16.9	68	15.2 15.3	15.0 15.0	15.1 ✓
50	17.3	16.8	17.0	69	17.3	17.3	17.3 ✓
65	15.4 15.0	15.2 15.0	15.1	103	17.0	17.2	17.1 ✓
367	17.1	16.8	16.9	104	15.0	15.0	15.0 ✓
368	17.4	17.3	17.4	105			
369	17.4	17.4	17.4	107	17.2	17.2	17.2 ✓
370	17.3	17.4	17.3	381	17.3	17.5	17.4 ✓
371	17.5	17.4	17.4	382	17.0	17.0	17.0 ✓
372	17.2	17.3	17.3	383	17.2	17.3	17.3 ✓
373	17.1	17.3	17.2	384	17.6	17.6	17.6 ✓
374	16.9	17.1	17.0	385	17.6	17.4	17.5 ✓
375	17.1	17.3	17.2	386	17.8	18.0	17.9 ✓
376	17.6	17.3	17.4	387	17.7	17.8	17.8 ✓
377	16.5	16.8	16.7	388	17.7	17.9	17.8 ✓
378	17.3	17.0	17.2	389	17.4	17.4	17.4 ✓
379	17.4	17.5	17.5	390	17.5	17.8	17.7 ✓
380	17.7	17.8	17.8	391	16.7 16.8	16.0 16.3	16.5 ✓
N7544	15.6	15.6	15.6				

Square 2

In sq. 17

Square 3

145	17.2	17.1	17.2 ✓
146	17.3	17.2	17.3 ✓
147	17.3	17.3	17.3 ✓

148	17.6	17.5	17.6 ✓	neb?	Square 4			
192	17.6 17.4	17.6 17.9	17.6 ✓		204	17.4	17.6	17.5 ✓
193 194	16.5	16.1	16.3 ✓	HN 0003 57	253	17.6	17.5	17.6 ✓
194 195	16.7	16.3	16.5 ✓	HN 0003 259.8	255	17.2	17.2	17.2 ✓
195	17.6	17.9	17.7 ✓	neb?	256	17.4	17.3	17.3 ✓
196	17.4	17.4	17.4 ✓	neb?	257	15.7	15.5	15.6 ✓
197	16.3	15.9	16.1 ✓	} Pair	260	16.5 16.8	16.2 15.9	16.4 ✓
198	16.5	16.5	16.5 ✓		261	17.2	17.1	17.2 ✓
199	17.7	17.8	17.8 ✓		262	17.2	17.1	17.1 ✓
200	17.8	17.9	17.9 ✓		263	16.6 16.6	16.1 15.9	16.3 ✓
201				✓	264	17.5	17.4	17.4 ✓
202	15.6	15.3	15.4 ✓		265	16.0	16.2	16.1 ✓
203	16.6	16.4	16.5 ✓	neb?	266	16.9	16.9	16.9 ✓
204				✓	269	17.2	17.1	17.1 ✓
392	17.0	16.8	16.9 ✓		280	17.5 17.4	17.9 18.0	17.7 ✓
393	17.4	17.4	17.4 ✓	FWWneb?	281	17.0	17.0	17.0 ✓
394	17.1	17.1	17.1 ✓	FWWneb?	282	17.7 17.3	17.9 17.9	17.7 ✓
395	17.5	17.5		neb?	283	17.0	16.8	16.9 ✓
396	17.6	17.6	17.6 ✓		400	16.7	16.8	16.8 ✓
397	17.4	17.4		neb?	401	16.7	16.8	16.7 ✓
398	17.2	17.2	17.2 ✓		402	17.1	17.2	17.2 ✓
399	17.2	17.3		neb?	403	17.0	17.0	17.0 ✓
HN0003 -02° 57.0					404	17.2	17.1	17.1 ✓
HN0003 -02° 59.8					405	17.0	17.0	17.0 ✓
					406	16.6	16.2	16.4 ✓

407	16.9	16.7	16.8 ✓		423	16.4	16.1	16.3 ✓	
408	17.4	17.6	17.5 ✓		424	16.6	16.6	16.6 ✓	
409	16.9	16.9	16.9 ✓		425	16.8	16.7	16.8 ✓	
410	17.4	17.3	17.4 ✓		426	16.9	16.8	16.9 ✓	
411	17.4	17.3	17.3 ✓	neb? Square 6					
412	17.5	17.3	17.4 ✓		15	17.6	17.9	17.8 ✓	neb?
413	17.2	16.8	17.0 ✓		16	16.3	16.3	16.3 ✓	
414	16.1 16.2	15.6 15.5	15.8 ✓		42	17.4	17.4	17.4 ✓	
415	17.1	17.3	17.2 ✓	FwW neb?	43	17.2	17.4	17.3 ✓	
416	17.0	17.3	17.2 ✓		44	17.4	17.4	17.4 ✓	
417	17.4	17.4	17.4 ✓		49	15.0	15.0	15.0 ✓	
418	17.3	17.0	17.1 ✓	*attSP	63	17.7	18.0	17.9 ✓	
419	16.7 16.9	16.8 16.2	16.7 ✓		427	16.8	16.5	16.6 ✓	FwW neb?
Square 5					428	17.3	17.2	17.3 ✓	
288	15.2	15.1	15.2 ✓		429	17.4	17.3	17.4 ✓	
308	16.8	16.8	16.8 ✓	neb?	430	17.3	17.4	17.3 ✓	
309	16.1	15.7	15.9 ✓		431	17.9 17.5	17.8 18.0	17.8 ✓	
310	16.3	16.1	16.2 ✓		432	17.1	17.2	17.2 ✓	
311	15.1	15.3	15.2 ✓	Spinal on Edge	433	17.3	17.3	17.3 ✓	
312	16.8	16.8	16.8 ✓		434	17.2	17.3	17.3 ✓	
339	15.6	15.2	15.4 ✓		435	17.0	16.8	16.9 ✓	
N7693	15.0	15.0	15.0 ✓		436	17.5	17.4	17.4 ✓	
420	17.0	16.8	16.9 ✓		437	16.9 16.9	16.6 16.4	16.7 ✓	
421	17.6	17.5	17.5 ✓	neb?	438	17.0	16.9	16.9 ✓	
422	16.7	16.8	16.8 ✓	obj. in F					

Square 7

51	17.8	17.7	
64	15.0	15.0	15.0 ✓
99	16.3	16.0	16.2 ✓
100	17.2	17.3	17.3 ✓
101	16.8	17.1	16.9 ✓
102	15.2 15.0 - 2	15.4 15.2	15.2 ✓
106	16.6	16.6	16.6 ✓
108	16.1	16.1	16.1 ✓
109	17.9	17.9	
110	16.9	16.8	16.8 ✓
141	15.0 15.0	14.9 14.9 15.0	14.9 ✓
142	17.2	17.2	17.2 ✓
143	17.4	17.4	17.4 ✓
144	17.3	17.0	17.1 ✓
439	16.6	16.8	16.7 ✓
440	17.5	17.5	17.5 ✓
441	17.3	17.4	17.4 ✓
442	17.3	17.2	17.3 ✓
443	17.2	17.3	17.2 ✓
444	17.4	17.3	17.3 ✓
445	17.8	17.8	17.8 ✓
446	17.5	17.3	17.4 ✓
447	17.4	17.2	17.3 ✓
448	17.7	17.4	17.6 ✓

Brt * inv.

FSB? ✓

FSB? ✓

Sprial ✓

L

FWWneb? ✓

neb? ✓

449	17.7	18.0	17.9 ✓
149	15.5 + 4	15.5	15.3 ✓
150	15.4 - 1	15.5	15.4 ✓
151	17.5	17.4	17.4 ✓
152	17.6	17.4	17.5 ✓
153	17.7	17.7	17.7 ✓
154	17.6	17.4	17.5 ✓
155	17.8	18.1	
156	17.3	17.2	17.3 ✓
158	17.2	17.1	17.2 ✓
189	17.4	17.7	17.5 ✓
190	17.5	17.7	17.6 ✓
191	17.4	17.6	
205	17.5	17.5	17.5 ✓
206	17.3	17.2	17.2 ✓
207	17.1	16.7	16.9 ✓
208	17.2	17.4	17.3 ✓
209	17.5	17.4	17.5 ✓
243	17.5	17.3	17.4 ✓
244	17.3	17.2	17.2 ✓
245	17.7	17.4	17.5 ✓
246	17.6	17.4	17.5 ✓
247	17.9	18.0	
248	17.3	17.2	17.2 ✓

neb? ✓

neb? ✓

neb? ✓

neb? ✓

neb? ✓

neb?	450	17.6	17.4	17.5 ✓		290	16.9	16.7	16.8 ✓	
	451	17.2	17.0	17.1 ✓		461	17.4	17.3	17.4 ✓	
	452	17.6	17.7	17.7 ✓		462	17.3	17.5 ✓	17.4 ✓	
neb?	453	17.5	17.4	17.4 ✓		463	17.3	17.4	17.3 ✓	
neb?	454	17.0	17.0	17.0 ✓		464	17.7	17.7	17.7 ✓	
	455	17.1	17.2	17.1 ✓		465				✓
	456	17.8	17.7	17.8 ✓		466	17.5	17.4	17.4 ✓	
	457	17.6	17.5	17.5 ✓		467	17.1	17.1	17.1 ✓	
neb?	458	17.5	17.2	17.4 ✓		468	17.2	16.9	17.1 ✓	
	459	16.7	16.8	16.7 ✓		469	17.3	17.5	17.4 ✓	neb?
	460	17.2	17.6	17.4 ✓	neb?	470	17.3	17.2	17.2 ✓	
Square 9						471	17.1	17.0	17.1 ✓	neb?
	249	17.6	17.3	17.4 ✓		472	17.2	17.2	17.2 ✓	
neb?	250	17.7	17.4	17.5 ✓		473	17.4	17.3	17.4 ✓	
	251	17.0	16.9	17.0 ✓	neb?	Square 10				
	254	16.9 16.8	16.7 16.3	16.7 ✓		291	17.9	18.0	17.9 ✓	
	267	17.5	17.8	17.7 ✓	FWW neb?	301	16.8	16.7	16.8 ✓	Spiral on Edge neb?
	268	17.5	17.2	17.4 ✓		302	17.2			
	270	17.7	17.6	17.7 ✓	neb?	303	17.0	16.6	16.8 ✓	
	271	17.6	17.3	17.4 ✓	neb?	304	16.7	16.3	16.5 ✓	
	272	17.0	17.0	17.0 ✓		305	17.0	16.8	16.9 ✓	
	277	17.5	17.4	17.5 ✓		306	16.5 16.8	16.0 16.0	16.3 ✓	neb?
	278	17.3	17.1	17.2 ✓		307	16.4 16.5	15.7 16.0	16.2 ✓	
neb?	279	17.5	17.3		neb?	331	17.2	17.2	17.2 ✓	neb?
	289	17.3	17.7	17.5 ✓		333	16.5 16.4	16.0 15.5	16.1 ✓	

334	16.6	16.5	16.5	✓	14	16.3	16.2	16.3	✓
335	17.6 17.3	17.9 17.9	17.7	✓	17	16.9	17.0	17.0	✓
336	17.6	17.8	17.7	✓	FWWneb? 18	17.3	17.3	17.3	neb? ✓
337	16.4	16.1	16.2	✓	19	17.2	17.3	17.3	✓
338	16.3	16.2	16.3	✓	20	15.0	15.0	15.0	✓
340	17.2	17.3	17.2	✓	21	16.4	16.0	16.2	✓
474	17.3	17.0	17.1	✓	neb? 32	17.3	17.3	17.3	✓
475	17.2	17.2	17.2	✓	33	17.2	17.3	17.2	neb? ✓
476	16.5	16.2	16.4	✓	45	17.1	17.1	17.1	✓
477	17.4	17.5	17.5	✓	52	17.6	17.4	17.5	✓
478	17.4	17.5	17.4	✓	54	17.5	17.3	17.4	✓
479	16.8	16.9	16.9	✓	491	17.6	17.5	17.5	✓
480					✓ 492	17.5	17.5	17.5	✓
481	17.3	17.2	17.2	✓	493	17.4	17.4	17.4	✓
482	17.0	17.1	17.1	✓	494	17.3	17.3	17.3	neb? ✓
483	17.4	17.5	17.4	✓	495	17.8 17.8	17.9 17.3	17.7	FWWneb? ✓
484	17.3	17.2	17.3	✓	496	17.3	17.3	17.3	✓
485	17.4	17.4	17.4	✓	497	15.9	15.9	15.9	✓
486	17.5	17.4	17.4	✓	FWWneb? 498	17.3	17.3	17.3	✓
487	17.4	17.3	17.3	✓	neb? 499	16.9	17.1	17.0	✓
488	17.5	17.8	17.6	✓	500	17.2	17.2	17.2	✓
489	17.6	18.0	17.8	✓	501	17.6	17.6	17.6	✓
490	17.9 17.5	17.9 18.0	17.8	✓	neb? 502	17.3	17.3	17.3	✓
Square 11					493a N7565? 16.9	17.0	17.0	17.0	neb? ✓
13	15.0	15.0	15.0	✓	15.1 N7589 15.2	16.0 15.7	15.5	15.5	✓

Square 12

53	17.5 17.3	17.9 17.9	17.7 ✓
55	16.9	16.7	16.8 ✓
61	17.9	17.8	17.9 ✓
62	17.1	17.3	17.2 ✓
70	17.7	17.7	17.7 ✓
71	17.0	16.9	17.0 ✓
72	16.6	16.6	16.6 ✓
111	15.9 +1	15.8	15.9 ✓
136	17.2	16.9	17.0 ✓
137	17.7	17.3	17.5 ✓
138	17.0	16.6	16.8 ✓
139	17.2	17.1	17.1 ✓
503	17.8	17.8	17.8 ✓
504	17.3	17.2	17.2 ✓
505	17.2	17.2	17.2 ✓
506	17.8	18.1	17.9 ✓
507	17.5	17.5	17.5 ✓
508	16.8	16.7	16.8 ✓
N7603	15.0	15.0	15.0

Square 13

140	17.6	17.7	17.7 ✓
157	17.7	17.8	17.8 ✓
159	17.3	17.5	17.4 ✓
161	17.3	17.1	17.2 ✓

FWWneb?

neb?
Spinal on EdgeSpinal on
Edge

162	17.5	17.6	17.5 ✓	17.6
163	17.9	18.1	18.0 ✓	17.8
164	16.8	16.4	16.6 ✓	16.9
178	16.6	16.4	16.5 ✓	
185	17.0 17.2	16.8 16.7	16.9 ✓	
186	17.6	17.6		neb?
187	15.6 15.7	15.2 15.1	15.4 ✓	
188	17.3	17.3	17.3 ✓	17.2
210	17.7	17.3	17.5 ✓	17.5
211	15.4 +1	15.3	15.4 ✓	15.6 Spinal on Edge
212	17.1	17.1	17.1 ✓	17.0
213	17.6	17.3	17.5 ✓	17.5
214	17.2	17.0	17.1 ✓	17.1
215	17.5	17.1	17.3 ✓	17.3
217	17.4	17.4	17.4 ✓	17.4 neb?
509	17.4	17.4	17.4 ✓	17.4
510	17.4	17.4	17.4 ✓	17.4 neb?
511	17.9	18.0		neb?
512	17.8	18.0	17.9 ✓	17.8 FWWneb?
513	17.8	17.8	17.8 ✓	17.7
514	17.5	17.3	17.4 ✓	17.3
515	17.2 17.2	17.0 16.7	17.0 ✓	neb?
516	17.3	17.2	17.2 ✓	17.4
517	17.7	18.0	17.9 ✓	17.9
518	17.6	17.2	17.4 ✓	17.4 neb?

519	17.2	17.3	17.2 ✓	17.0		300	16.3	16.0	16.2 ✓	
520	17.6	17.4	17.5 ✓	17.3		313	17.9	18.0	17.9 ✓	neb?
Square 14						314	17.3	17.3	17.3 ✓	neb?
242	17.8	17.4	17.6 ✓			315	17.8	17.9	17.8 ✓	
273	17.3	17.1	17.2 ✓	Spinel on		316	17.4	17.3	17.3 ✓	
274	17.8	18.1	17.9 ✓	Edge		317	17.3	17.0	17.2 ✓	
275	18.0	18.1	18.0 ✓	FWW neb?		328	16.8	16.8	16.8 ✓	
276	17.3	17.3	17.3 ✓	neb?		329	17.9	17.9	17.9 ✓	neb?
282	16.7	16.4	16.5 ✓			332	17.2			neb?
293	16.7	16.4	16.6 ✓			532	16.6	16.7	16.7 ✓	
296	17.2	16.8	17.0 ✓			533	17.3	17.5	17.4 ✓	
521	17.5	17.7	17.6 ✓	FWW neb?		534	17.2	17.2	17.2 ✓	
522	17.3	17.3	17.3 ✓			535	17.2	17.3	17.2 ✓	
523	17.4	17.2	17.3 ✓			536	17.3	17.4	17.3 ✓	neb?
524	17.7	17.7	17.7 ✓	neb?		537	16.5	16.8	16.6 ✓	
525	17.6	17.6	17.6 ✓			538	17.2	17.1	17.1 ✓	
526	17.3	17.0	17.1 ✓			539	17.6	17.8	17.7 ✓	FWW neb?
527	17.2	17.0	17.1 ✓			540	17.3	17.5	17.4 ✓	
528	17.3	17.3	17.3 ✓	FWW neb?		541	17.3	17.4	17.4 ✓	
529	17.5	17.6	17.6 ✓			542	17.7	17.8	17.7 ✓	
530	17.4	17.3	17.3 ✓			N 7684	15.0	15.0	15.0 ✓	
531	17.3	17.4	17.4 ✓	FWW neb?		Square 16				

Square 15

297	17.3	17.5	17.4 ✓	neb?		22	16.2	15.8	16.0 ✓	
298	16.9	17.3	17.1 ✓			23	17.9	17.5	17.7 ✓	
						24	16.8	17.1	16.9 ✓	
				FSB			16.5	17.0		
				neb?						

26	16.2	16.5	16.4 ✓	Spiral ✓ on Edge ✓	75	16.1	15.8	16.0	
27	17.2	17.4	17.3 ✓	FWW neb? ✓	76	17.2	17.3	17.2 ✓	
28	15.5	15.6	15.5 ✓		77	16.6	16.4	16.5 ✓	
29	17.6	17.9	17.8 ✓		78	16.4	16.1	16.3	
30	16.7	16.4	16.5 ✓	FWW neb? ✓	79	17.0	16.6	16.8 ✓	Spiral on Edge
31	16.4	16.8	16.6 ✓		80	17.1	16.9	17.0 ✓	
46	17.6	17.3	17.4 ✓		81	17.2	17.5	17.3 ✓	
47	17.1	17.2	17.1 ✓		87	17.6	18.0		neb? ✓
48	17.1	17.2	17.1 ✓		88	16.7	16.9	16.8 ✓	
56	15.9	16.1	16.0 ✓		89	15.6 -1	15.7	15.6 ✓	
57	17.0	17.2	17.1 ✓		91	15.4 +4	15.0	15.2 ✓	
58	17.4	17.5	17.4 ✓	F.S.B.?	92	17.1	16.6	17.0 ✓	
543	17.3	17.4	17.3 ✓		93	16.9	16.8	16.9 ✓	
544	16.7	16.7	16.7 ✓		94	17.2	17.3	17.2 ✓	
545	17.2	17.5	17.4 ✓		95	16.7	16.9	16.8 ✓	
546	16.6	16.3	16.5 ✓		96	17.0	17.4	17.2 ✓	Spiral on Edge
547	17.1	17.2	17.2 ✓		97	17.1	17.2	17.1 ✓	Spiral on Edge
548	16.9	17.2	17.1 ✓		98	17.8	17.9	17.9 ✓	
549	17.3 17.3	17.1 16.8	17.1 ✓		112	17.1	16.8	17.0 ✓	
550	16.8	16.6	16.7 ✓		113	17.0	16.9	17.0 ✓	
Square 17					114	17.5	17.5	17.5 ✓	
59	17.5	17.7	17.6 ✓		121	16.6 16.7	16.3 16.2	16.5 ✓	
60	17.0	17.3	17.1 ✓		122	17.5	17.5	17.5 ✓	
73	15.9 -1	16.0	16.0	Spiral on Edge	123	17.3	17.2	17.2 ✓	
74	16.0	15.8	15.9		124	15.4 0	15.4	15.4 ✓	
					125	17.8	17.7	17.7 ✓	neb? ✓

126	15.8 -1	15.9	15.8 ✓	15.9	160	17.8	18.0	17.9 ✓	F.W.W. neb?
127	17.2	17.3	17.3 ✓		165	17.3 17.3	17.4 17.8	17.4 ✓	F.W.W. neb?
128	17.1	17.2	17.2 ✓		166	17.8	17.6	17.7 ✓	
129	17.8	17.7	17.7 ✓		167	16.8	17.1	16.9 ✓	
130	17.9	17.7	17.8 ✓		170	17.2	17.2	17.2 ✓	
551	17.2	17.2	17.2 ✓		171	16.8	17.2	17.0 ✓	
552	17.2	17.2	17.2 ✓		172	15.5 -3	15.8	15.6 ✓	
553	17.6	17.4	17.5 ✓		173	16.9	17.2	17.1 ✓	
554	17.7	17.5		neb? ✓	174	17.5	17.7	17.6 ✓	
555	17.4			✓	175	16.7	17.1	16.9 ✓	
556	17.4	17.3	17.4 ✓		176	17.5	17.4	17.4 ✓	
557	17.3	17.2	17.3 ✓		177	17.6	17.3	17.5 ✓	
558	16.6	16.8	16.7 ✓		179	17.8	17.5	17.6 ✓	
559	16.8	16.5	16.6 ✓		180	16.3	16.0	16.1 ✓	F.S.B.?
560	17.6	17.7	17.7 ✓		218	17.2	17.3		
561	17.3	17.2	17.2 ✓		219	17.7	18.1		neb?
562	17.5	17.6	17.5 ✓		220	16.8	16.6	16.7 ✓	
563	17.6	17.7	17.6 ✓		221	16.1	16.2	16.2 ✓	
564	17.0	17.0	17.0 ✓		222	17.3	17.2	17.3 ✓	
N7629	15.1 -2	15.3	15.2 ✓		565	17.3	17.3	17.3 ✓	
Square 18					566	17.2	17.2	17.2 ✓	
131					567	17.7	17.7	17.7 ✓	neb?
132	17.3	17.7	17.5 ✓		568	17.8	17.4		✓
133	17.9	17.1		neb? ✓	569	17.2	17.1	17.2 ✓	
134	15.4 +1	15.3	15.4 ✓		570	17.6	17.4	17.5 ✓	F.W.W. neb?

571	17.2	17.2	17.2 ✓	neb? 349	17.0	17.1	17.0 ✓
572	17.2	17.2	17.2 ✓	neb? 577	16.8	17.1	16.9 ✓
N 7642	J15.0	J15.0	J15.0 ✓	578	17.2	17.0	17.1 ✓

Square 19

231	17.9	18.1	18.0 ✓	579	16.9	17.2	17.0 ✓
232	17.5	17.4	17.5 ✓	580	17.6	17.4	17.5 ✓
233	17.3	17.4	17.4 ✓	581	17.2	17.6	17.4 ✓
234	17.3	17.3	17.3 ✓	582	17.3	17.4	17.3 ✓
235	17.8	17.9	17.9 ✓	FWW neb? 583	17.4	17.2	17.3 ✓
236	17.6	17.3	17.4 ✓	neb? 584	17.3	17.3	17.3 ✓
238	17.5	17.7	17.7 ✓	neb? 585	17.5	17.4	17.4 ✓
241	15.8 +1	15.7	15.7 ✓	586	17.3	17.3	17.3 ✓
294	17.2	17.2	17.2 ✓	587	17.2	17.3	17.3 ✓

Square 21

295	17.1	17.1	17.1 ✓	588	17.2	17.1	17.2 ✓
573	17.3	17.5	17.4 ✓	589	17.4	17.3	17.3 ✓
574	17.3	17.3	17.3 ✓	590	17.3	17.3	17.3 ✓
575	17.4	17.3	17.4 ✓	591	17.5	17.5	17.5 ✓
576	17.8	18.0	17.9 ✓	592	17.1	17.0	17.0 ✓

Square 20

320	17.2	17.3	17.3 ✓	*NIP 83	17.3	17.3	17.3 ✓
321	17.1	17.0	17.0 ✓	84	17.1	17.2	17.2 ✓
326	17.3	17.4	17.3 ✓	85	17.3	17.2	17.3 ✓
330	16.6	16.4	16.5 ✓	neb? 90	17.6	17.9	17.8 ✓
344	17.5 17.2	17.9 17.8	17.6 ✓	116	17.3	17.6	17.5 ✓
345	17.1	17.5	17.3 ✓	FWW neb? 117	17.6	17.4	17.5 ✓
346	17.6	17.6	17.6 ✓	118	17.8	16.7	16.7 ✓

119	17.4	17.8	17.6 ✓
593	17.6	17.9	17.8 ✓
594	17.0	17.2	17.1 ✓
595	17.1	17.3	17.2 ✓
596	17.6	17.8	17.7 ✓
597	17.3	17.3	17.3 ✓
598	17.2	17.2	17.2 ✓
IC 1482	15.2	15.0	15.1 ✓
599	17.4	17.5	17.5 ✓
Square 23			
168	17.7	17.6	17.6 ✓
169	17.6	18.0	17.8 ✓
181	17.4	17.1	17.3 ✓
182	17.0	17.2	17.1 ✓
183	17.1	16.8	17.0 ✓
184	17.1	17.1	17.1 ✓
600			
601	17.8	18.0	17.9 ✓
602	17.9	17.9	
603	17.3	17.1	17.2 ✓
604	17.4	17.3	17.3 ✓
605	17.3	17.3	17.3 ✓
606	17.5	17.6	17.6 ✓
607	16.9	16.9	16.9 ✓
608	17.3	17.4	17.3 ✓
609	17.1	17.2	17.2 ✓
610	+		
611	17.4	17.3	17.3 ✓
612	16.8	16.8	16.8 ✓

Square 24

223	17.0	17.2	17.1 ✓
224	15.8	16.0	15.9 ✓
226	15.1	15.3	15.2 ✓
227	15.7 15.3	15.9 15.8	15.7 ✓
228	17.0	17.3	17.2 ✓
229	17.2	17.3	17.3 ✓
230	17.4	17.8	17.6 ✓
237	17.1	17.2	17.2 ✓
239	17.0	17.1	17.1 ✓
240	16.6	16.4	16.5 ✓
319	17.6	17.6	17.6 ✓
613	17.2	17.3	17.2 ✓
614	17.4	17.4	17.4 ✓
615	17.4	17.5	17.5 ✓
616	17.1	17.2	17.2 ✓
617	17.2	17.4	17.3 ✓
618	17.3	17.2	17.3 ✓
619	17.0	17.2	17.1 ✓
620	17.1	17.5	17.3 ✓
621	17.2 16.8	17.0 17.3	17.0 ✓
Square 25			
322	16.9	16.8	16.8 ✓
325	15.5	15.3	15.4 ✓
327	17.2	17.4	17.3 ✓
622	16.8	17.1	16.9 ✓
623	17.2	17.2	17.2 ✓
624	17.2	17.6	17.4 ✓
625	17.0	17.6	17.3 ✓

FSB?

neb?

neb?

neb?

EWS neb?

neb?

neb?

Diff between mag, CDBT FWA

$$1.47 - 7 = 15.70$$

1936phae.proj.2377B