

1)

140	121	130	281
122	99	124	204
<hr/>			
_____ > _____ > _____ > _____			

6)

219		322
243		314
<hr/>		
_____ > _____ > _____ > _____		

2)

232	248	96	234
302	255	133	276
<hr/>			
_____ > _____ > _____ > _____			

8)

16		40
54		124
<hr/>		
_____ > _____ > _____ > _____		

3)

100	118	130	81
217	306	303	168
<hr/>			
_____ > _____ > _____ > _____			

10)

82		51
314		219
<hr/>		
_____ > _____ > _____ > _____		

4)

735	705	808	650
786	670	727	788
<hr/>			
_____ > _____ > _____ > _____			

12)

209		244
160		191
<hr/>		
_____ > _____ > _____ > _____		

5)

956	441	893	800
993	392	740	769
<hr/>			
_____ > _____ > _____ > _____			

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~4'00" : Superior	

1)			
$\frac{281}{204} > \frac{121}{99} > \frac{140}{122} > \frac{130}{124}$			
1.377	1.222	1.148	1.048

2)			
$\frac{248}{255} > \frac{234}{276} > \frac{232}{302} > \frac{96}{133}$			
0.973	0.848	0.768	0.722

3)			
$\frac{81}{168} > \frac{100}{217} > \frac{130}{303} > \frac{118}{306}$			
0.482	0.461	0.429	0.386

4)			
$\frac{808}{727} > \frac{705}{670} > \frac{735}{786} > \frac{650}{788}$			
1.111	1.052	0.935	0.825

5)			
$\frac{893}{740} > \frac{441}{392} > \frac{800}{769} > \frac{956}{993}$			
1.207	1.125	1.040	0.963

6)	$\frac{219}{243}$	47.03%	322
	0.901	->	314
		29.22%	1.025
7)	$\frac{167}{264}$	1.21%	165
	0.633	<-	232
		13.79%	0.711
8)	$\frac{16}{54}$	150.00%	40
	0.296	->	124
		129.63%	0.323
9)	$\frac{85}{92}$	124.71%	191
	0.924	->	209
		127.17%	0.914
10)	$\frac{82}{314}$	60.78%	51
	0.261	<-	219
		43.38%	0.233
11)	$\frac{261}{21}$	36.65%	191
	12.429	<-	15
		40.00%	12.733
12)	$\frac{209}{160}$	16.75%	244
	1.306	->	191
		19.38%	1.277
13)	$\frac{82}{275}$	41.46%	116
	0.298	->	340
		23.64%	0.341
14)	$\frac{125}{241}$	941.67%	12
	0.519	<-	24
		904.17%	0.500
15)	$\frac{49}{156}$	25.64%	39
	0.314	<-	126
		23.81%	0.310

1)

$\frac{19}{14}$	$\frac{312}{216}$	$\frac{168}{139}$	$\frac{307}{202}$
-----------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

6)

$\frac{252}{215}$	<input type="text"/>	$\frac{280}{229}$
-------------------	----------------------	-------------------

2)

$\frac{258}{267}$	$\frac{312}{268}$	$\frac{187}{215}$	$\frac{340}{323}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

8)

$\frac{310}{328}$	<input type="text"/>	$\frac{78}{94}$
-------------------	----------------------	-----------------

3)

$\frac{286}{214}$	$\frac{249}{168}$	$\frac{239}{188}$	$\frac{250}{150}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

9)

$\frac{307}{318}$	<input type="text"/>	$\frac{80}{89}$
-------------------	----------------------	-----------------

4)

$\frac{461}{405}$	$\frac{877}{966}$	$\frac{826}{799}$	$\frac{429}{358}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

10)

$\frac{235}{290}$	<input type="text"/>	$\frac{147}{189}$
-------------------	----------------------	-------------------

5)

$\frac{308}{368}$	$\frac{503}{577}$	$\frac{586}{789}$	$\frac{668}{990}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

11)

$\frac{22}{285}$	<input type="text"/>	$\frac{18}{260}$
------------------	----------------------	------------------

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problems

12)

$\frac{295}{111}$	<input type="text"/>	$\frac{185}{74}$
-------------------	----------------------	------------------

13)

$\frac{187}{137}$	<input type="text"/>	$\frac{166}{118}$
-------------------	----------------------	-------------------

14)

$\frac{94}{42}$	<input type="text"/>	$\frac{320}{131}$
-----------------	----------------------	-------------------

15)

$\frac{320}{340}$	<input type="text"/>	$\frac{254}{268}$
-------------------	----------------------	-------------------

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5'00"~5'30" : Average

4'30"~5'00" : good

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1)	$\frac{307}{202} > \frac{312}{216} > \frac{19}{14} > \frac{168}{139}$
1.520	1.444
1.357	1.209

2)	$\frac{312}{268} > \frac{340}{323} > \frac{258}{267} > \frac{187}{215}$
1.164	1.053
0.966	0.870

3)	$\frac{250}{150} > \frac{249}{168} > \frac{286}{214} > \frac{239}{188}$
1.667	1.482
1.336	1.271

4)	$\frac{429}{358} > \frac{461}{405} > \frac{826}{799} > \frac{877}{966}$
1.198	1.138
1.034	0.908

5)	$\frac{503}{577} > \frac{308}{368} > \frac{586}{789} > \frac{668}{990}$
0.872	0.837
0.743	0.675

6)	$\frac{252}{215} > \frac{1.172}{1.172}$	11.11%	280
		->	229
		6.51%	1.223
7)	$\frac{49}{44} > \frac{1.114}{1.114}$	10.20%	54
		->	48
		9.09%	1.125
8)	$\frac{310}{328} > \frac{0.945}{0.945}$	297.44%	78
		-<	94
		248.94%	0.830
9)	$\frac{307}{318} > \frac{0.965}{0.965}$	283.75%	80
		-<	89
		257.30%	0.899
10)	$\frac{235}{290} > \frac{0.810}{0.810}$	59.86%	147
		-<	189
		53.44%	0.778
11)	$\frac{22}{285} > \frac{0.077}{0.077}$	22.22%	18
		-<	260
		9.62%	0.069
12)	$\frac{295}{111} > \frac{2.658}{2.658}$	59.46%	185
		-<	74
		50.00%	2.500
13)	$\frac{187}{137} > \frac{1.365}{1.365}$	12.65%	166
		-<	118
		16.10%	1.407
14)	$\frac{94}{42} > \frac{2.238}{2.238}$	240.43%	320
		->	131
		211.90%	2.443
15)	$\frac{320}{340} > \frac{0.941}{0.941}$	25.98%	254
		-<	268
		26.87%	0.948

1)

154	34	62	149
323	61	123	257
_____ > _____ > _____ > _____			

6)

54		44
30		23

2)

292	270	94	282
270	286	81	335
_____ > _____ > _____ > _____			

8)

153		54
282		107

3)

199	195	310	195
145	194	270	153
_____ > _____ > _____ > _____			

9)

290		300
231		256

4)

315	584	503	460
467	922	907	934
_____ > _____ > _____ > _____			

10)

110		322
40		103

5)

308	945	597	641
252	695	406	396
_____ > _____ > _____ > _____			

11)

52		80
194		332

12)

178		223
231		305

13)

79		315
45		180

14)

48		220
66		313

15)

162		212
202		301

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1)			
$\frac{149}{257} > \frac{34}{61} > \frac{62}{123} > \frac{154}{323}$			
0.580	0.557	0.504	0.477

2)			
$\frac{94}{81} > \frac{292}{270} > \frac{270}{286} > \frac{282}{335}$			
1.160	1.081	0.944	0.842

3)			
$\frac{199}{145} > \frac{195}{153} > \frac{310}{270} > \frac{195}{194}$			
1.372	1.275	1.148	1.005

4)			
$\frac{315}{467} > \frac{584}{922} > \frac{503}{907} > \frac{460}{934}$			
0.675	0.633	0.555	0.493

5)			
$\frac{641}{396} > \frac{597}{406} > \frac{945}{695} > \frac{308}{252}$			
1.619	1.470	1.360	1.222

6)	$\frac{54}{30}$	22.73% <- 44 23 1.913
	1.800	30.43%
7)	$\frac{258}{273}$	57.32% <- 164 196 0.837
	0.945	39.29%
8)	$\frac{153}{282}$	183.33% <- 54 107 0.505
	0.543	163.55%
9)	$\frac{290}{231}$	3.45% -> 300 256 1.172
	1.255	10.82%
10)	$\frac{110}{40}$	192.73% -> 322 103 3.126
	2.750	157.50%
11)	$\frac{52}{194}$	53.85% -> 80 332 0.241
	0.268	71.13%
12)	$\frac{178}{231}$	25.28% -> 223 305 0.731
	0.771	32.03%
13)	$\frac{79}{45}$	298.73% -> 315 180 1.750
	1.756	300.00%
14)	$\frac{48}{66}$	358.33% -> 220 313 0.703
	0.727	374.24%
15)	$\frac{162}{202}$	30.86% -> 212 301 0.704
	0.802	49.01%

1)

293	284	168	253
205	244	134	156
<hr/>			
_____ > _____ > _____ > _____			

6)

206		280
221		302
<hr/>		

2)

47	162	192	309
39	147	199	230
<hr/>			
_____ > _____ > _____ > _____			

8)

292		178
165		87
<hr/>		

3)

168	277	329	239
137	194	249	160
<hr/>			
_____ > _____ > _____ > _____			

10)

259		147
303		195
<hr/>		

4)

688	681	673	674
757	956	823	648
<hr/>			
_____ > _____ > _____ > _____			

11)

256		140
309		183
<hr/>		

5)

253	292	281	316
320	283	315	443
<hr/>			
_____ > _____ > _____ > _____			

12)

260		220
192		173
<hr/>		

13)

290		183
236		168
<hr/>		

14)

160		177
182		186
<hr/>		

15)

157		266
131		201
<hr/>		

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1)						
253	>	293	>	168	>	284
156		205		134		244
1.622		1.429		1.254		1.164

2)						
309	>	47	>	162	>	192
230		39		147		199
1.343		1.205		1.102		0.965

3)						
239	>	277	>	329	>	168
160		194		249		137
1.494		1.428		1.321		1.226

4)						
674	>	688	>	673	>	681
648		757		823		956
1.040		0.909		0.818		0.712

5)						
292	>	281	>	253	>	316
283		315		320		443
1.032		0.892		0.791		0.713

6)	206	35.92%	280
	221	->	302
	0.932	36.65%	0.927
7)	307	87.20%	164
	228	<-	105
	1.346	117.14%	1.562
8)	292	64.04%	178
	165	<-	87
	1.770	89.66%	2.046
9)	310	7.74%	334
	236	->	261
	1.314	10.59%	1.280
10)	259	76.19%	147
	303	<-	195
	0.855	55.38%	0.754
11)	256	82.86%	140
	309	<-	183
	0.828	68.85%	0.765
12)	260	18.18%	220
	192	<-	173
	1.354	10.98%	1.272
13)	290	58.47%	183
	236	<-	168
	1.229	40.48%	1.089
14)	160	10.63%	177
	182	->	186
	0.879	2.20%	0.952
15)	157	69.43%	266
	131	->	201
	1.198	53.44%	1.323

1)

161	142	142	200
337	206	257	320
<hr/>			
_____ > _____ > _____ > _____			

6)

287		264
282		266
<hr/>		

2)

73	69	258	171
119	101	338	265
<hr/>			
_____ > _____ > _____ > _____			

8)

278		166
326		206
<hr/>		

3)

85	66	47	110
206	134	104	202
<hr/>			
_____ > _____ > _____ > _____			

10)

295		153
303		158
<hr/>		

4)

479	589	628	821
570	584	845	930
<hr/>			
_____ > _____ > _____ > _____			

12)

264		200
328		237
<hr/>		

5)

289	789	849	538
245	826	807	490
<hr/>			
_____ > _____ > _____ > _____			

13)

327		333
280		283
<hr/>		

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1)	$\frac{142}{206} > \frac{200}{320} > \frac{142}{257} > \frac{161}{337}$
	0.689 0.625 0.553 0.478

2)	$\frac{258}{338} > \frac{69}{101} > \frac{171}{265} > \frac{73}{119}$
	0.763 0.683 0.645 0.613

3)	$\frac{110}{202} > \frac{66}{134} > \frac{47}{104} > \frac{85}{206}$
	0.545 0.493 0.452 0.413

4)	$\frac{589}{584} > \frac{821}{930} > \frac{479}{570} > \frac{628}{845}$
	1.009 0.883 0.840 0.743

5)	$\frac{289}{245} > \frac{538}{490} > \frac{849}{807} > \frac{789}{826}$
	1.180 1.098 1.052 0.955

6)	$\frac{287}{282} < \frac{264}{266}$
	1.018 0.992
7)	$\frac{243}{287} < \frac{134}{163}$
	0.847 0.822
8)	$\frac{278}{326} < \frac{166}{206}$
	0.853 0.806
9)	$\frac{225}{94} > \frac{295}{110}$
	2.394 2.682
10)	$\frac{295}{303} < \frac{153}{158}$
	0.974 0.968
11)	$\frac{175}{57} > \frac{298}{88}$
	3.070 3.386
12)	$\frac{264}{328} < \frac{200}{237}$
	0.805 0.844
13)	$\frac{327}{280} > \frac{333}{283}$
	1.168 1.177
14)	$\frac{144}{147} < \frac{114}{127}$
	0.980 0.898
15)	$\frac{146}{207} > \frac{241}{328}$
	0.705 0.735

1)

126	106	168	90
236	207	299	145
<hr/>			
_____ > _____ > _____ > _____			

6)

97	_____	251
50	_____	142
<hr/>		

2)

308	252	155	120
333	329	154	149
<hr/>			
_____ > _____ > _____ > _____			

8)

127	_____	112
153	_____	138
<hr/>		

3)

220	141	128	201
241	203	160	313
<hr/>			
_____ > _____ > _____ > _____			

10)

94	_____	168
138	_____	267
<hr/>		

4)

384	853	210	661
380	960	220	832
<hr/>			
_____ > _____ > _____ > _____			

12)

192	_____	128
302	_____	192
<hr/>		

5)

719	544	240	464
920	923	372	646
<hr/>			
_____ > _____ > _____ > _____			

13)

53	_____	56
300	_____	307
<hr/>		

14)

107	_____	221
40	_____	84
<hr/>		

15)

142	_____	116
102	_____	74
<hr/>		

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1)
$\frac{90}{145} > \frac{168}{299} > \frac{126}{236} > \frac{106}{207}$
0.621
0.562
0.534
0.512

6)	97	158.76%	251
	50	->	142
	1.940	184.00%	1.768

2)
$\frac{155}{154} > \frac{308}{333} > \frac{120}{149} > \frac{252}{329}$
1.006
0.925
0.805
0.766

7)	6	866.67%	58
	38	->	328
	0.158	763.16%	0.177

3)
$\frac{220}{241} > \frac{128}{160} > \frac{141}{203} > \frac{201}{313}$
0.913
0.800
0.695
0.642

8)	127	13.39%	112
	153	<-	138
	0.830	10.87%	0.812

4)
$\frac{384}{380} > \frac{210}{220} > \frac{853}{960} > \frac{661}{832}$
1.011
0.955
0.889
0.794

10)	94	78.72%	168
	138	->	267
	0.681	93.48%	0.629

5)
$\frac{719}{920} > \frac{464}{646} > \frac{240}{372} > \frac{544}{923}$
0.782
0.718
0.645
0.589

11)	267	15.58%	231
	325	<-	287
	0.822	13.24%	0.805

12)	192	50.00%	128
	302	<-	192
	0.636	57.29%	0.667

13)	53	5.66%	56
	300	->	307
	0.177	2.33%	0.182

14)	107	106.54%	221
	40	->	84
	2.675	110.00%	2.631

15)	142	22.41%	116
	102	<-	74
	1.392	37.84%	1.568

1)

237	264	309	132
264	335	304	186
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

6)

175	_____	202
135	_____	174
<hr/>		

7)

47	_____	109
107	_____	233
<hr/>		

2)

181	138	274	56
148	141	257	60
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

8)

44	_____	49
273	_____	342
<hr/>		

9)

148	_____	172
195	_____	229
<hr/>		

3)

141	177	195	70
256	261	319	90
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

10)

251	_____	131
268	_____	144
<hr/>		

11)

121	_____	215
76	_____	129
<hr/>		

4)

752	587	275	583
698	687	300	584
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

12)

206	_____	306
224	_____	325
<hr/>		

5)

718	781	606	721
882	836	935	963
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

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~4'00" : Superior	

1)	$\frac{309}{304} > \frac{237}{264} > \frac{264}{335} > \frac{132}{186}$	1.016	0.898	0.788	0.710
----	---	-------	-------	-------	-------

2)	$\frac{181}{148} > \frac{274}{257} > \frac{138}{141} > \frac{56}{60}$	1.223	1.066	0.979	0.933
----	---	-------	-------	-------	-------

3)	$\frac{70}{90} > \frac{177}{261} > \frac{195}{319} > \frac{141}{256}$	0.778	0.678	0.611	0.551
----	---	-------	-------	-------	-------

4)	$\frac{752}{698} > \frac{583}{584} > \frac{275}{300} > \frac{587}{687}$	1.077	0.998	0.917	0.854
----	---	-------	-------	-------	-------

5)	$\frac{781}{836} > \frac{718}{882} > \frac{721}{963} > \frac{606}{935}$	0.934	0.814	0.749	0.648
----	---	-------	-------	-------	-------

6)	$\frac{175}{135} > \frac{135}{1.296}$	15.43%	->	$\frac{202}{174}$	1.161
7)	$\frac{47}{107} > \frac{107}{0.439}$	28.89%	->	$\frac{109}{233}$	0.468
8)	$\frac{44}{273} > \frac{273}{0.161}$	131.91%	->	$\frac{49}{342}$	0.143
9)	$\frac{148}{195} > \frac{195}{0.759}$	117.76%	->	$\frac{172}{229}$	0.751
10)	$\frac{251}{268} > \frac{268}{0.937}$	11.36%	->	$\frac{131}{144}$	0.910
11)	$\frac{121}{76} > \frac{76}{1.592}$	86.11%	<-	$\frac{215}{129}$	1.667
12)	$\frac{206}{224} > \frac{224}{0.920}$	77.69%	->	$\frac{306}{325}$	0.942
13)	$\frac{52}{134} > \frac{134}{0.388}$	48.54%	->	$\frac{149}{332}$	0.449
14)	$\frac{80}{332} > \frac{332}{0.241}$	186.54%	<-	$\frac{42}{189}$	0.222
15)	$\frac{257}{183} > \frac{183}{1.404}$	90.48%	<-	$\frac{255}{173}$	1.474

1)

$$\begin{array}{r} 17 \\ \times 15 \\ \hline 15 & 75 \\ & 48 \\ \hline & 50 \\ & 237 \\ \hline & 175 \end{array}$$

_____ > _____ > _____ > _____

6)

$$\begin{array}{r} 121 \\ \times 119 \\ \hline & 119 \\ & 121 \\ \hline & 289 \\ & 296 \end{array}$$

2)

$$\begin{array}{r} 99 \\ \times 133 \\ \hline 296 \\ 323 \\ \hline 97 \\ 71 \\ \hline 72 \end{array}$$

_____ > _____ > _____ > _____

8)

$$\begin{array}{r} 54 \\ \times 155 \\ \hline & 155 \\ & 54 \\ \hline & 86 \\ & 273 \end{array}$$

3)

$$\begin{array}{r} 288 \\ \times 243 \\ \hline 261 \\ 208 \\ \hline 94 \\ 65 \\ \hline 165 \\ 145 \end{array}$$

_____ > _____ > _____ > _____

9)

$$\begin{array}{r} 135 \\ \times 120 \\ \hline & 120 \\ & 135 \\ \hline & 323 \\ & 249 \end{array}$$

4)

$$\begin{array}{r} 616 \\ \times 692 \\ \hline 483 \\ 499 \\ \hline 982 \\ 847 \\ \hline 468 \\ 430 \end{array}$$

_____ > _____ > _____ > _____

10)

$$\begin{array}{r} 161 \\ \times 298 \\ \hline & 298 \\ & 161 \\ \hline & 186 \\ & 301 \end{array}$$

5)

$$\begin{array}{r} 652 \\ \times 623 \\ \hline 572 \\ 580 \\ \hline 686 \\ 907 \\ \hline 791 \\ 922 \end{array}$$

_____ > _____ > _____ > _____

11)

$$\begin{array}{r} 159 \\ \times 71 \\ \hline & 71 \\ & 159 \\ \hline & 228 \\ & 88 \end{array}$$

12)

$$\begin{array}{r} 39 \\ \times 214 \\ \hline & 214 \\ & 39 \\ \hline & 37 \\ & 203 \end{array}$$

13)

$$\begin{array}{r} 244 \\ \times 221 \\ \hline & 221 \\ & 244 \\ \hline & 311 \\ & 321 \end{array}$$

14)

$$\begin{array}{r} 143 \\ \times 125 \\ \hline & 125 \\ & 143 \\ \hline & 215 \\ & 182 \end{array}$$

15)

$$\begin{array}{r} 219 \\ \times 321 \\ \hline & 321 \\ & 219 \\ \hline & 106 \\ & 152 \end{array}$$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)
$\frac{75}{48} > \frac{237}{175} > \frac{59}{50} > \frac{17}{15}$
1.563
1.354
1.180
1.133

2)
$\frac{72}{71} > \frac{296}{323} > \frac{83}{97} > \frac{99}{133}$
1.014
0.916
0.856
0.744

3)
$\frac{94}{65} > \frac{261}{208} > \frac{288}{243} > \frac{165}{145}$
1.446
1.255
1.185
1.138

4)
$\frac{982}{847} > \frac{468}{430} > \frac{483}{499} > \frac{616}{692}$
1.159
1.088
0.968
0.890

5)
$\frac{652}{623} > \frac{572}{580} > \frac{791}{922} > \frac{686}{907}$
1.047
0.986
0.858
0.756

6)	121	138.84%	289
	119	->	296
	1.017	->	0.976
		148.74%	
7)	71	51.06%	47
	205	<-	134
	0.346	<-	0.351
		52.99%	
8)	54	59.26%	86
	155	->	273
	0.348	->	0.315
		76.13%	
9)	135	139.26%	323
	120	->	249
	1.125	->	1.297
		107.50%	
10)	161	15.53%	186
	298	->	301
	0.540	->	0.618
		1.01%	
11)	159	43.40%	228
	71	->	88
	2.239	->	2.591
		23.94%	
12)	39	5.41%	37
	214	<-	203
	0.182	<-	0.182
		5.42%	
13)	244	27.46%	311
	221	->	321
	1.104	->	0.969
		45.25%	
14)	143	50.35%	215
	125	->	182
	1.144	->	1.181
		45.60%	
15)	219	106.60%	106
	321	<-	152
	0.682	<-	0.697
		111.18%	

1)

314	102	321	277
141	41	171	136
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

6)

172	_____	116
313	_____	211
<hr/>		

7)

50	_____	230
62	_____	288
<hr/>		

2)

30	176	35	186
70	325	73	313
<hr/>			
_____	_____	_____	_____

8)

72	_____	257
79	_____	306
<hr/>		

3)

159	261	82	93
222	273	102	111
<hr/>			
_____	_____	_____	_____

10)

323	_____	296
334	_____	276
<hr/>		

4)

983	262	940	755
921	260	780	794
<hr/>			
_____	_____	_____	_____

11)

23	_____	47
91	_____	208
<hr/>		

5)

59	282	922	846
76	316	874	889
<hr/>			
_____	_____	_____	_____

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)
$\frac{102}{41} > \frac{314}{141} > \frac{277}{136} > \frac{321}{171}$
2.488
2.227
2.037
1.877

2)
$\frac{186}{313} > \frac{176}{325} > \frac{35}{73} > \frac{30}{70}$
0.594
0.542
0.479
0.429

3)
$\frac{261}{273} > \frac{93}{111} > \frac{82}{102} > \frac{159}{222}$
0.956
0.838
0.804
0.716

4)
$\frac{940}{780} > \frac{983}{921} > \frac{262}{260} > \frac{755}{794}$
1.205
1.067
1.008
0.951

5)
$\frac{922}{874} > \frac{846}{889} > \frac{282}{316} > \frac{59}{76}$
1.055
0.952
0.892
0.776

6)	$\frac{172}{313}$	48.28%	116
	0.550	<-	211
	0.550	48.34%	
		360.00%	
7)	$\frac{50}{62}$	->	230
	0.806	->	288
	0.799	364.52%	
		256.94%	
8)	$\frac{72}{79}$	->	257
	0.911	->	306
	0.840	287.34%	
		56.97%	
9)	$\frac{259}{285}$	<-	165
	0.909	<-	164
	1.006	73.78%	
		9.12%	
10)	$\frac{323}{334}$	<-	296
	0.967	<-	276
	1.072	21.01%	
		104.35%	
11)	$\frac{23}{91}$	->	47
	0.253	->	208
	0.226	128.57%	
		69.07%	
12)	$\frac{164}{329}$	<-	97
	0.498	<-	177
	0.548	85.88%	
		30.12%	
13)	$\frac{249}{191}$	->	324
	1.304	->	224
	1.446	17.28%	
		71.70%	
14)	$\frac{159}{126}$	->	273
	1.262	->	196
	1.393	55.56%	
		0.00%	
15)	$\frac{191}{314}$	->	191
	0.608	->	336
	0.568	7.01%	

1)

60	322	235	233
42	280	196	175
<hr/>			
_____ > _____ > _____ > _____			

6)

89		182
80		157
<hr/>		

2)

186	262	254	88
195	256	304	79
<hr/>			
_____ > _____ > _____ > _____			

8)

330		231
266		197
<hr/>		

3)

336	307	242	276
324	330	206	321
<hr/>			
_____ > _____ > _____ > _____			

10)

151		298
78		151
<hr/>		

4)

740	490	950	334
463	288	711	235
<hr/>			
_____ > _____ > _____ > _____			

11)

166		174
201		202
<hr/>		

5)

638	428	237	406
298	169	119	180
<hr/>			
_____ > _____ > _____ > _____			

12)

146		225
237		322
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{60}{42} > \frac{233}{175} > \frac{235}{196} > \frac{322}{280}$
1.429	1.331
1.199	1.150

2)	$\frac{88}{79} > \frac{262}{256} > \frac{186}{195} > \frac{254}{304}$
1.114	1.023
0.954	0.836

3)	$\frac{242}{206} > \frac{336}{324} > \frac{307}{330} > \frac{276}{321}$
1.175	1.037
0.930	0.860

4)	$\frac{490}{288} > \frac{740}{463} > \frac{334}{235} > \frac{950}{711}$
1.701	1.598
1.421	1.336

5)	$\frac{428}{169} > \frac{406}{180} > \frac{638}{298} > \frac{237}{119}$
2.533	2.256
2.141	1.992

6)	$\frac{89}{80}$	104.49% > ->	182 157 1.159
	1.113	96.25%	
7)	$\frac{254}{244}$	104.84% <- <-	124 116 1.069
	1.041	110.34%	
8)	$\frac{330}{266}$	42.86% <- <-	231 197 1.173
	1.241	35.03%	
9)	$\frac{291}{286}$	38.57% <- <-	210 221 0.950
	1.017	29.41%	
10)	$\frac{151}{78}$	97.35% > >	298 151 1.974
	1.936	93.59%	
11)	$\frac{166}{201}$	4.82% > >	174 202 0.861
	0.826	0.50%	
12)	$\frac{146}{237}$	54.11% > >	225 322 0.699
	0.616	35.86%	
13)	$\frac{122}{310}$	40.23% <- <-	87 242 0.360
	0.394	28.10%	
14)	$\frac{143}{97}$	84.62% > >	264 183 1.443
	1.474	88.66%	
15)	$\frac{202}{86}$	49.63% <- <-	135 64 2.109
	2.349	34.38%	

1)

169	160	130	179
224	195	183	205
<hr/>			
_____ > _____ > _____ > _____			

6)

221		326
191		299
<hr/>		

2)

127	119	142	14
266	226	331	25
<hr/>			
_____ > _____ > _____ > _____			

8)

217		295
146		218
<hr/>		

3)

193	155	73	221
272	295	122	332
<hr/>			
_____ > _____ > _____ > _____			

10)

299		191
250		166
<hr/>		

4)

901	247	908	892
572	143	660	679
<hr/>			
_____ > _____ > _____ > _____			

11)

267		95
230		87
<hr/>		

5)

433	750	353	702
696	967	535	967
<hr/>			
_____ > _____ > _____ > _____			

12)

231		173
188		159
<hr/>		

13)

263		233
268		239
<hr/>		

14)

195		285
113		168
<hr/>		

15)

289		126
330		163
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)						
179	>	160	>	169	>	130
205		195		224		183
0.873		0.821		0.754		0.710

2)						
14	>	119	>	127	>	142
25		226		266		331
0.560		0.527		0.477		0.429

3)						
193	>	221	>	73	>	155
272		332		122		295
0.710		0.666		0.598		0.525

4)						
247	>	901	>	908	>	892
143		572		660		679
1.727		1.575		1.376		1.314

5)						
750	>	702	>	353	>	433
967		967		535		696
0.776		0.726		0.660		0.622

6)	221	47.51%	326
	191	->	299
	1.157	56.54%	1.090
7)	322	22.90%	262
	202	<-	167
	1.594	20.96%	1.569
8)	217	35.94%	295
	146	->	218
	1.486	49.32%	1.353
9)	50	560.00%	330
	30	->	225
	1.667	650.00%	1.467
10)	299	56.54%	191
	250	<-	166
	1.196	50.60%	1.151
11)	267	181.05%	95
	230	<-	87
	1.161	164.37%	1.092
12)	231	33.53%	173
	188	<-	159
	1.229	18.24%	1.088
13)	263	12.88%	233
	268	<-	239
	0.981	12.13%	0.975
14)	195	46.15%	285
	113	->	168
	1.726	48.67%	1.696
15)	289	129.37%	126
	330	<-	163
	0.876	102.45%	0.773

1)

236	276	155	215
313	280	180	264
<hr/>			
_____ > _____ > _____ > _____			

6)

290		304
146		165
<hr/>		

2)

222	134	69	143
219	146	72	166
<hr/>			
_____ > _____ > _____ > _____			

8)

216		327
184		269
<hr/>		

3)

101	132	138	211
95	109	151	216
<hr/>			
_____ > _____ > _____ > _____			

10)

303		292
198		183
<hr/>		

4)

289	503	131	377
313	570	118	366
<hr/>			
_____ > _____ > _____ > _____			

12)

275		101
245		79
<hr/>		

5)

577	745	955	572
418	648	911	465
<hr/>			
_____ > _____ > _____ > _____			

13)

12		12
58		55
<hr/>		

14)

159		132
164		124
<hr/>		

15)

219		252
207		264
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{276}{280} > \frac{155}{180} > \frac{215}{264} > \frac{236}{313}$
276	155
280	180
0.986	0.861
215	264
313	0.814
0.754	

2)	$\frac{222}{219} > \frac{69}{72} > \frac{134}{146} > \frac{143}{166}$
222	69
219	72
1.014	0.958
134	146
166	0.918
0.861	

3)	$\frac{132}{109} > \frac{101}{95} > \frac{211}{216} > \frac{138}{151}$
132	101
109	95
1.211	1.063
211	216
151	0.977
0.914	

4)	$\frac{131}{118} > \frac{377}{366} > \frac{289}{313} > \frac{503}{570}$
131	377
118	366
1.110	1.030
289	313
570	0.923
0.882	

5)	$\frac{577}{418} > \frac{572}{465} > \frac{745}{648} > \frac{955}{911}$
577	572
418	465
1.380	1.230
745	648
955	1.150
911	1.048

6)	$\frac{290}{146} > \frac{1.986}{0.698} > \frac{304}{165} > \frac{1.842}{0.699}$
290	146
1.986	0.698
304	165
1.842	0.699
4.83%	
->	
13.01%	
240.00%	
->	
239.53%	
51.39%	
->	
46.20%	
177.63%	
<-	
160.76%	
3.77%	
<-	
8.20%	
61.22%	
<-	
63.33%	
172.28%	
<-	
210.13%	
0.00%	
<-	
5.45%	
20.45%	
<-	
32.26%	
15.07%	
<-	
27.54%	
252	
264	
0.955	

1)

298	186	125	272
234	197	106	256
<hr/>			
_____ > _____ > _____ > _____			

6)

294		316
138		164
<hr/>		

2)

83	132	246	155
121	202	331	259
<hr/>			
_____ > _____ > _____ > _____			

8)

192		252
150		198
<hr/>		

3)

228	330	71	292
121	184	43	196
<hr/>			
_____ > _____ > _____ > _____			

9)

180		220
90		98
<hr/>		

4)

958	751	878	612
588	568	608	482
<hr/>			
_____ > _____ > _____ > _____			

10)

216		196
303		238
<hr/>		

5)

358	627	766	725
272	690	675	689
<hr/>			
_____ > _____ > _____ > _____			

11)

26		43
183		312
<hr/>		

12)

138		329
149		324
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)						
298	>	125	>	272	>	186
234		106		256		197
1.274		1.179		1.063		0.944

2)						
246	>	83	>	132	>	155
331		121		202		259
0.743		0.686		0.653		0.598

3)						
228	>	330	>	71	>	292
121		184		43		196
1.884		1.793		1.651		1.490

4)						
958	>	878	>	751	>	612
588		608		568		482
1.629		1.444		1.322		1.270

5)						
358	>	766	>	725	>	627
272		675		689		690
1.316		1.135		1.052		0.909

6)	294	7.48%	316
	138	->	164
	2.130	18.84%	1.927
7)	254	12.60%	286
	259	->	259
	0.981	0.00%	1.104
8)	192	31.25%	252
	150	->	198
	1.280	32.00%	1.273
9)	180	22.22%	220
	90	->	98
	2.000	8.89%	2.245
10)	216	10.20%	196
	303	<-	238
	0.713	27.31%	0.824
11)	26	65.38%	43
	183	->	312
	0.142	70.49%	0.138
12)	138	138.41%	329
	149	->	324
	0.926	117.45%	1.015
13)	325	3.83%	313
	315	<-	262
	1.032	20.23%	1.195
14)	212	29.27%	164
	328	<-	284
	0.646	15.49%	0.577
15)	106	152.38%	42
	273	<-	102
	0.388	167.65%	0.412

1)

269	153	234	234
311	201	253	325
<hr/>			
_____ > _____ > _____ > _____			

6)

126	_____	47
324	_____	108
<hr/>		

2)

269	245	227	322
240	286	194	328
<hr/>			
_____ > _____ > _____ > _____			

8)

166	_____	196
253	_____	269
<hr/>		

3)

185	332	250	47
185	263	261	41
<hr/>			
_____ > _____ > _____ > _____			

10)

204	_____	170
132	_____	103
<hr/>		

4)

202	306	616	325
393	538	967	463
<hr/>			
_____ > _____ > _____ > _____			

11)

288	_____	194
307	_____	214
<hr/>		

5)

956	356	874	881
987	336	734	699
<hr/>			
_____ > _____ > _____ > _____			

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)						
234	>	269	>	153	>	234
253		311		201		325
0.925		0.865		0.761		0.720

6)	126	168.09%	47
	324	<-	108
	0.389	200.00%	0.435

2)						
227	>	269	>	322	>	245
194		240		328		286
1.170		1.121		0.982		0.857

7)	330	91.86%	172
	276	<-	125
	1.196	120.80%	1.376

3)						
332	>	47	>	185	>	250
263		41		185		261
1.262		1.146		1.000		0.958

8)	166	18.07%	196
	253	->	269
	0.656	6.32%	0.729

4)						
325	>	616	>	306	>	202
463		967		538		393
0.702		0.637		0.569		0.514

11)	288	48.45%	194
	307	<-	214
	0.938	43.46%	0.907

5)						
881	>	874	>	356	>	956
699		734		336		987
1.260		1.191		1.060		0.969

14)	50	110.00%	105
	82	->	189
	0.610	130.49%	0.556

15)	232	129.70%	101
	323	<-	128
	0.718	152.34%	0.789

1)

26	335	183	222
20	311	151	230
<hr/>			
_____ >	_____ >	_____ >	_____

6)

143	<input type="text"/>	113
330	<input type="text"/>	241
<hr/>		

2)

333	167	316	246
283	124	197	166
<hr/>			
_____ >	_____ >	_____ >	_____

8)

241	<input type="text"/>	179
297	<input type="text"/>	229
<hr/>		

3)

272	273	286	303
252	311	240	316
<hr/>			
_____ >	_____ >	_____ >	_____

9)

280	<input type="text"/>	80
296	<input type="text"/>	81
<hr/>		

4)

915	91	905	607
577	48	548	430
<hr/>			
_____ >	_____ >	_____ >	_____

10)

101	<input type="text"/>	196
87	<input type="text"/>	183
<hr/>		

5)

478	708	909	218
635	772	936	256
<hr/>			
_____ >	_____ >	_____ >	_____

11)

313	<input type="text"/>	134
293	<input type="text"/>	118
<hr/>		

12)

289	<input type="text"/>	291
81	<input type="text"/>	81
<hr/>		

13)

315	<input type="text"/>	108
142	<input type="text"/>	49
<hr/>		

14)

42	<input type="text"/>	111
120	<input type="text"/>	308
<hr/>		

15)

157	<input type="text"/>	209
293	<input type="text"/>	336
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)			
$\frac{26}{20} > \frac{183}{151} > \frac{335}{311} > \frac{222}{230}$			
1.300	1.212	1.077	0.965

2)			
$\frac{316}{197} > \frac{246}{166} > \frac{167}{124} > \frac{333}{283}$			
1.604	1.482	1.347	1.177

3)			
$\frac{286}{240} > \frac{272}{252} > \frac{303}{316} > \frac{273}{311}$			
1.192	1.079	0.959	0.878

4)			
$\frac{91}{48} > \frac{905}{548} > \frac{915}{577} > \frac{607}{430}$			
1.896	1.651	1.586	1.412

5)			
$\frac{909}{936} > \frac{708}{772} > \frac{218}{256} > \frac{478}{635}$			
0.971	0.917	0.852	0.753

6)	$\frac{143}{330}$	26.55%	113
	0.433	<-	241
7)	$\frac{108}{335}$	36.93%	62
	0.322	<-	168
8)	$\frac{241}{297}$	74.19%	179
	0.811	<-	229
9)	$\frac{280}{296}$	34.64%	80
	0.946	<-	81
10)	$\frac{101}{87}$	250.00%	196
	1.161	<-	183
11)	$\frac{313}{293}$	94.06%	134
	1.068	<-	118
12)	$\frac{289}{81}$	133.58%	291
	3.568	<-	81
13)	$\frac{315}{142}$	0.69%	108
	2.218	<-	49
14)	$\frac{42}{120}$	191.67%	2.204
	0.350	<-	
15)	$\frac{157}{293}$	164.29%	111
	0.536	<-	308
		156.67%	0.360
		33.12%	
		>	209
		>	336
		14.68%	0.622

1)

182	189	222	149
213	205	285	212
_____ > _____ > _____ > _____			

6)

212		64
284		79

2)

73	192	144	119
168	338	311	243
_____ > _____ > _____ > _____			

8)

189		189
269		297

3)

331	248	120	330
196	126	68	207
_____ > _____ > _____ > _____			

10)

306		226
171		125

4)

633	268	253	281
971	386	425	530
_____ > _____ > _____ > _____			

12)

86		195
90		201

5)

609	734	653	444
929	941	953	740
_____ > _____ > _____ > _____			

13)

183		234
35		51

14)

149		105
134		91

15)

160		149
180		167

For each incorrect answer,
15" is added
to the time
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problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{189}{205} > \frac{182}{213} > \frac{222}{285} > \frac{149}{212}$	0.922	0.854	0.779	0.703
----	---	-------	-------	-------	-------

2)	$\frac{192}{338} > \frac{119}{243} > \frac{144}{311} > \frac{73}{168}$	0.568	0.490	0.463	0.435
----	--	-------	-------	-------	-------

3)	$\frac{248}{126} > \frac{120}{68} > \frac{331}{196} > \frac{330}{207}$	1.968	1.765	1.689	1.594
----	--	-------	-------	-------	-------

4)	$\frac{268}{386} > \frac{633}{971} > \frac{253}{425} > \frac{281}{530}$	0.694	0.652	0.595	0.530
----	---	-------	-------	-------	-------

5)	$\frac{734}{941} > \frac{653}{953} > \frac{609}{929} > \frac{444}{740}$	0.780	0.685	0.656	0.600
----	---	-------	-------	-------	-------

6)	$\frac{212}{284}$	231.25%	<-	64	79
	0.746	259.49%	<-	0.810	
7)	$\frac{203}{172}$	9.85%	->	223	211
	1.180	22.67%	->	1.057	
8)	$\frac{189}{269}$	0.00%	->	189	297
	0.703	10.41%	->	0.636	
9)	$\frac{193}{160}$	14.51%	->	221	162
	1.206	1.25%	->	1.364	
10)	$\frac{306}{171}$	35.40%	<-	226	125
	1.789	36.80%	<-	1.808	
11)	$\frac{306}{301}$	56.92%	<-	195	218
	1.017	38.07%	<-	0.894	
12)	$\frac{86}{90}$	126.74%	->	195	201
	0.956	123.33%	->	0.970	
13)	$\frac{183}{35}$	27.87%	->	234	51
	5.229	45.71%	->	4.588	
14)	$\frac{149}{134}$	41.90%	<-	105	91
	1.112	47.25%	<-	1.154	
15)	$\frac{160}{180}$	7.38%	<-	149	167
	0.889	7.78%	<-	0.892	

1)

202	136	182	205
310	187	232	231
<hr/>			
_____ > _____ > _____ > _____			

6)

293		171
311		190
<hr/>		

2)

210	317	113	256
129	232	78	148
<hr/>			
_____ > _____ > _____ > _____			

8)

308		280
186		156
<hr/>		

3)

190	311	283	203
160	324	219	185
<hr/>			
_____ > _____ > _____ > _____			

10)

128		163
156		215
<hr/>		

4)

881	593	798	647
750	675	743	667
<hr/>			
_____ > _____ > _____ > _____			

12)

195		152
265		211
<hr/>		

5)

565	628	358	764
972	943	476	883
<hr/>			
_____ > _____ > _____ > _____			

13)

105		107
104		109
<hr/>		

14)

30		93
23		81
<hr/>		

15)

231		119
328		183
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)	$\frac{205}{231} > \frac{182}{232} > \frac{136}{187} > \frac{202}{310}$
	0.887 0.784 0.727 0.652

2)	$\frac{256}{148} > \frac{210}{129} > \frac{113}{78} > \frac{317}{232}$
	1.730 1.628 1.449 1.366

3)	$\frac{283}{219} > \frac{190}{160} > \frac{203}{185} > \frac{311}{324}$
	1.292 1.188 1.097 0.960

4)	$\frac{881}{750} > \frac{798}{743} > \frac{647}{667} > \frac{593}{675}$
	1.175 1.074 0.970 0.879

5)	$\frac{764}{883} > \frac{358}{476} > \frac{628}{943} > \frac{565}{972}$
	0.865 0.752 0.666 0.581

6)	$\frac{293}{311} < \frac{171}{190}$
	0.942 0.900
7)	$\frac{218}{199} < \frac{180}{146}$
	1.095 1.233
8)	$\frac{308}{186} < \frac{280}{156}$
	1.656 1.795
9)	$\frac{156}{294} > \frac{174}{328}$
	0.531 0.530
10)	$\frac{128}{156} > \frac{163}{215}$
	0.821 0.758
11)	$\frac{212}{101} > \frac{235}{108}$
	2.099 2.176
12)	$\frac{195}{265} > \frac{152}{211}$
	0.736 0.720
13)	$\frac{105}{104} > \frac{107}{109}$
	1.010 0.982
14)	$\frac{30}{23} > \frac{93}{81}$
	1.304 1.148
15)	$\frac{231}{328} > \frac{119}{183}$
	0.704 0.650

1)

$\frac{255}{236}$	$\frac{270}{219}$	$\frac{277}{200}$	$\frac{37}{25}$
-------------------	-------------------	-------------------	-----------------

_____ > _____ > _____ > _____

6)

$\frac{300}{158}$	_____	$\frac{105}{49}$
-------------------	-------	------------------

2)

$\frac{220}{224}$	$\frac{329}{311}$	$\frac{203}{160}$	$\frac{282}{246}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

8)

$\frac{103}{128}$	_____	$\frac{141}{189}$
-------------------	-------	-------------------

3)

$\frac{224}{197}$	$\frac{124}{119}$	$\frac{199}{240}$	$\frac{173}{180}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

10)

$\frac{185}{149}$	_____	$\frac{271}{208}$
-------------------	-------	-------------------

4)

$\frac{590}{590}$	$\frac{713}{901}$	$\frac{840}{936}$	$\frac{597}{712}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

11)

$\frac{154}{51}$	_____	$\frac{232}{83}$
------------------	-------	------------------

5)

$\frac{658}{817}$	$\frac{226}{297}$	$\frac{425}{438}$	$\frac{884}{999}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

12)

$\frac{85}{240}$	_____	$\frac{52}{127}$
------------------	-------	------------------

13)

$\frac{41}{150}$	_____	$\frac{73}{231}$
------------------	-------	------------------

14)

$\frac{100}{48}$	_____	$\frac{321}{162}$
------------------	-------	-------------------

15)

$\frac{279}{89}$	_____	$\frac{296}{107}$
------------------	-------	-------------------

For each incorrect answer,
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6'00"~ : Need Work

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5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)	$\frac{37}{25} > \frac{277}{200} > \frac{270}{219} > \frac{255}{236}$
1.480	1.385

2)	$\frac{203}{160} > \frac{282}{246} > \frac{329}{311} > \frac{220}{224}$
1.269	1.146

3)	$\frac{224}{197} > \frac{124}{119} > \frac{173}{180} > \frac{199}{240}$
1.137	1.042

4)	$\frac{590}{590} > \frac{840}{936} > \frac{597}{712} > \frac{713}{901}$
1.000	0.897

5)	$\frac{425}{438} > \frac{884}{999} > \frac{658}{817} > \frac{226}{297}$
0.970	0.885

6)	$\frac{300}{158}$	185.71%	105
	1.899	<-	49
		222.45%	2.143
7)	$\frac{107}{162}$	117.76%	233
	0.660	->	321
		98.15%	0.726
8)	$\frac{103}{128}$	36.89%	141
	0.805	->	189
		47.66%	0.746
9)	$\frac{163}{190}$	7.95%	151
	0.858	<-	153
		24.18%	0.987
10)	$\frac{185}{149}$	46.49%	271
	1.242	->	208
		39.60%	1.303
11)	$\frac{154}{51}$	50.65%	232
	3.020	->	83
		62.75%	2.795
12)	$\frac{85}{240}$	63.46%	52
	0.354	<-	127
		88.98%	0.409
13)	$\frac{41}{150}$	78.05%	73
	0.273	->	231
		54.00%	0.316
14)	$\frac{100}{48}$	221.00%	321
	2.083	->	162
		237.50%	1.981
15)	$\frac{279}{89}$	6.09%	296
	3.135	->	107
		20.22%	2.766

2:51.

1)

$$\begin{array}{r} 267 \\ 152 \\ \hline 115 \end{array} \quad \begin{array}{r} 340 \\ 226 \\ \hline 114 \end{array} \quad \begin{array}{r} 278 \\ 138 \\ \hline 140 \end{array} \quad \begin{array}{r} 71 \\ 45 \\ \hline 26 \end{array}$$

$$\begin{array}{c} > \\ 2 \\ \hline \end{array} > \begin{array}{c} 4 \\ \hline \end{array} > \begin{array}{c} 1 \\ \hline \end{array} > \begin{array}{c} 2 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 243 \\ 105 \\ \hline 138 \end{array} \quad \begin{array}{r} 338 \\ 160 \\ \hline 178 \end{array} \quad \begin{array}{r} 188 \\ 103 \\ \hline 85 \end{array} \quad \begin{array}{r} 253 \\ 97 \\ \hline 156 \end{array}$$

$$\begin{array}{c} 2 \\ \hline \end{array} > \begin{array}{c} 3 \\ \hline \end{array} > \begin{array}{c} 4 \\ \hline \end{array} > \begin{array}{c} 1 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 187 \\ 259 \\ \hline 72 \end{array} \quad \begin{array}{r} 252 \\ 290 \\ \hline 38 \end{array} \quad \begin{array}{r} 184 \\ 289 \\ \hline 105 \end{array} \quad \begin{array}{r} 176 \\ 221 \\ \hline 55 \end{array}$$

$$\begin{array}{c} 3 \\ \hline \end{array} > \begin{array}{c} 1 \\ \hline \end{array} > \begin{array}{c} 4 \\ \hline \end{array} > \begin{array}{c} 2 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 991 \\ 592 \\ \hline 400 \end{array} \quad \begin{array}{r} 561 \\ 313 \\ \hline 248 \end{array} \quad \begin{array}{r} 284 \\ 148 \\ \hline 136 \end{array} \quad \begin{array}{r} 920 \\ 427 \\ \hline 493 \end{array}$$

$$\begin{array}{c} 3 \\ \hline \end{array} > \begin{array}{c} 4 \\ \hline \end{array} > \begin{array}{c} 2 \\ \hline \end{array} > \begin{array}{c} 1 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 314 \\ 461 \\ \hline 147 \end{array} \quad \begin{array}{r} 500 \\ 866 \\ \hline 366 \end{array} \quad \begin{array}{r} 484 \\ 901 \\ \hline 417 \end{array} \quad \begin{array}{r} 542 \\ 864 \\ \hline 322 \end{array}$$

$$\begin{array}{c} 1 \\ \hline \end{array} > \begin{array}{c} 2 \\ \hline \end{array} > \begin{array}{c} 4 \\ \hline \end{array} > \begin{array}{c} 2 \\ \hline \end{array}$$

6)

$$\begin{array}{r} 228 \\ 303 \\ \hline 75 \end{array} \quad \begin{array}{c} < \\ \hline \end{array} \quad \begin{array}{r} 133 \\ 153 \\ \hline 20 \end{array}$$

7)

$$\begin{array}{r} 246 \\ 334 \\ \hline 88 \end{array} \quad \begin{array}{c} > \\ \hline \end{array} \quad \begin{array}{r} 36 \\ 49 \\ \hline 13 \end{array}$$

8)

$$\begin{array}{r} 324 \\ 146 \\ \hline 178 \end{array} \quad \begin{array}{c} < \\ \hline \end{array} \quad \begin{array}{r} 213 \\ 89 \\ \hline 124 \end{array}$$

9)

$$\begin{array}{r} 81 \\ 60 \\ \hline 21 \end{array} \quad \begin{array}{c} < \\ \hline \end{array} \quad \begin{array}{r} 331 \\ 240 \\ \hline 91 \end{array}$$

10)

$$\begin{array}{r} 218 \\ 211 \\ \hline 7 \end{array} \quad \begin{array}{c} < \\ \hline \end{array} \quad \begin{array}{r} 115 \\ 97 \\ \hline 18 \end{array}$$

11)

$$\begin{array}{r} 305 \\ 187 \\ \hline 118 \end{array} \quad \begin{array}{c} > \\ \hline \end{array} \quad \begin{array}{r} 212 \\ 137 \\ \hline 75 \end{array}$$

12)

$$\begin{array}{r} 322 \\ 335 \\ \hline 13 \end{array} \quad \begin{array}{c} < \\ \hline \end{array} \quad \begin{array}{r} 96 \\ 89 \\ \hline 7 \end{array}$$

13)

$$\begin{array}{r} 207 \\ 116 \\ \hline 91 \end{array} \quad \begin{array}{c} > \\ \hline \end{array} \quad \begin{array}{r} 273 \\ 162 \\ \hline 111 \end{array}$$

14)

$$\begin{array}{r} 161 \\ 104 \\ \hline 57 \end{array} \quad \begin{array}{c} < \\ \hline \end{array} \quad \begin{array}{r} 265 \\ 154 \\ \hline 111 \end{array}$$

15)

$$\begin{array}{r} 332 \\ 133 \\ \hline 200 \end{array} \quad \begin{array}{c} > \\ \hline \end{array} \quad \begin{array}{r} 49 \\ 20 \\ \hline 29 \end{array}$$

For each incorrect answer,
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problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{278}{138} > \frac{267}{152} > \frac{71}{45} > \frac{340}{226}$
	2.014 1.757 1.578 1.504

2)	$\frac{253}{97} > \frac{243}{105} > \frac{338}{160} > \frac{188}{103}$
	2.608 2.314 2.113 1.825

3)	$\frac{252}{290} > \frac{176}{221} > \frac{187}{259} > \frac{184}{289}$
	0.869 0.796 0.722 0.637

4)	$\frac{920}{427} > \frac{284}{148} > \frac{561}{313} > \frac{991}{592}$
	2.155 1.919 1.792 1.674

5)	$\frac{314}{461} > \frac{542}{864} > \frac{500}{866} > \frac{484}{901}$
	0.681 0.627 0.577 0.537

6)	$\frac{228}{303}$	71.43% <- 133
	0.752	98.04% 583.33% 153
7)	$\frac{246}{334}$	<- <- 36
	0.737	581.63% 52.11% 49
8)	$\frac{324}{146}$	<- <- 213
	2.219	64.04% 308.64% 89
9)	$\frac{81}{60}$	-> -> 331
	1.350	300.00% 89.57% 240
10)	$\frac{218}{211}$	<- <- 115
	1.033	117.53% 43.87% 97
11)	$\frac{305}{187}$	<- <- 212
	1.631	36.50% 235.42% 137
12)	$\frac{322}{335}$	<- <- 96
	0.961	276.40% 31.88% 89
13)	$\frac{207}{116}$	-> -> 273
	1.784	39.66% 64.60% 162
14)	$\frac{161}{104}$	-> -> 265
	1.548	48.08% 577.55% 154
15)	$\frac{332}{133}$	<- <- 49
	2.496	565.00% 20 2.450

3 45

1)

$$\begin{array}{r} 78 \\ 173 \\ \hline 166 \\ 328 \\ \hline 146 \\ 256 \\ \hline 132 \\ 202 \\ \hline \end{array}$$

4 > 3 > 2 > 1

2)

$$\begin{array}{r} 24 \\ 14 \\ \hline 270 \\ 136 \\ \hline 30 \\ 20 \\ \hline 264 \\ 201 \\ \hline \end{array}$$

2 > 1 > 3 > 4

3)

$$\begin{array}{r} 233 \\ 204 \\ \hline 77 \\ 82 \\ \hline 257 \\ 305 \\ \hline 341 \\ 340 \\ \hline \end{array}$$

1 > 2 > 4 > 3

4)

$$\begin{array}{r} 999 \\ 714 \\ \hline 994 \\ 823 \\ \hline 499 \\ 458 \\ \hline 342 \\ 357 \\ \hline \end{array}$$

1 > 2 > 3 > 4

5)

$$\begin{array}{r} 650 \\ 757 \\ \hline 905 \\ 969 \\ \hline 427 \\ 568 \\ \hline 331 \\ 420 \\ \hline \end{array}$$

2 > 1 > 3 > 4

6)

$$\begin{array}{r} 273 \\ 328 \\ \hline 240 \\ 285 \\ \hline \end{array}$$

< 240 8/10

7)

$$\begin{array}{r} 164 \\ 113 \\ \hline 262 \\ 171 \\ \hline \end{array}$$

< 262 171

8)

$$\begin{array}{r} 311 \\ 171 \\ \hline 176 \\ 84 \\ \hline \end{array}$$

< 176 84

9)

$$\begin{array}{r} 85 \\ 14 \\ \hline 77 \\ 12 \\ \hline \end{array}$$

< 77 12

10)

$$\begin{array}{r} 331 \\ 148 \\ \hline 224 \\ 89 \\ \hline \end{array}$$

< 224 89

11)

$$\begin{array}{r} 306 \\ 319 \\ \hline 247 \\ 241 \\ \hline \end{array}$$

< 247 241

12)

$$\begin{array}{r} 51 \\ 107 \\ \hline 68 \\ 148 \\ \hline \end{array}$$

> 68 148

13)

$$\begin{array}{r} 282 \\ 153 \\ \hline 137 \\ 71 \\ \hline \end{array}$$

< 137 71

14)

$$\begin{array}{r} 304 \\ 339 \\ \hline 232 \\ 240 \\ \hline \end{array}$$

< 232 240

15)

$$\begin{array}{r} 128 \\ 82 \\ \hline 281 \\ 176 \\ \hline \end{array}$$

< 281 176

For each incorrect answer,
15" is added
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6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

3: ~

1)

$$\frac{132}{202} > \frac{146}{256} > \frac{166}{328} > \frac{78}{173}$$

0.653

0.570

0.506

0.451

2)

$$\frac{270}{136} > \frac{24}{14} > \frac{30}{20} > \frac{264}{201}$$

1.985

1.714

1.500

1.313

3)

$$\frac{233}{204} > \frac{341}{340} > \frac{77}{82} > \frac{257}{305}$$

1.142

1.003

0.939

0.843

4)

$$\frac{999}{714} > \frac{994}{823} > \frac{499}{458} > \frac{342}{357}$$

1.399

1.208

1.090

0.958

5)

$$\frac{905}{969} > \frac{650}{757} > \frac{331}{420} > \frac{427}{568}$$

0.934

0.859

0.788

0.752

6)

$\frac{273}{328}$

0.832

13.75%

<-

240

285

0.842

7)

$\frac{164}{113}$

1.451

59.76%

->

262

171

1.532

8)

$\frac{311}{171}$

1.819

76.70%

<-

176

84

2.095

9)

$\frac{85}{14}$

6.071

10.39%

<-

77

12

6.417

10)

$\frac{331}{148}$

2.236

47.77%

<-

224

89

2.517

11)

$\frac{306}{319}$

0.959

23.89%

<-

247

241

1.025

12)

$\frac{51}{107}$

0.477

33.33%

->

68

148

0.459

13)

$\frac{282}{153}$

1.843

105.84%

<-

137

71

1.930

14)

$\frac{304}{339}$

0.897

31.03%

<-

232

240

0.967

15)

$\frac{128}{82}$

1.561

119.53%

->

281

176

1.597

1)

203	315	307	255
209	<u>272</u>	<u>300</u>	<u>233</u>
4	1	3	2

 > > >

2)

301	303	212	193
287	<u>306</u>	<u>230</u>	<u>234</u>
1	2	3	4

 > > >

3)

77	48	103	218
27	12	29	<u>66</u>
4	1	2	3

 > > >

~~4)~~

314	739	867	912
216	402	<u>554</u>	<u>529</u>
4	1	3	2

 > > >

~~5)~~

364	570	704	771
292	476	615	576
2	3	4	1

 > > >

6)

114	251	<	138
263	●		

7)

180	301	>	158
276	●		

8)

161	220	>	71
109	●		

9)

272	236	<	303
242	●		

10)

87	54	<	231
140	●		

11)

239	178	<	288
185	●		

12)

290	167	>	140
83	●		

13)

177	166	<	245
213	●		

14)

224	98	>	318
141	●		

15)

147	274	<	125
216	●		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{315}{272} > \frac{255}{233} > \frac{307}{300} > \frac{203}{209}$
1.158	1.094

2)	$\frac{301}{287} > \frac{303}{306} > \frac{212}{230} > \frac{193}{234}$
1.049	0.990

3)	$\frac{48}{12} > \frac{103}{29} > \frac{218}{66} > \frac{77}{27}$
4.000	3.552

4)	$\frac{739}{402} > \frac{912}{529} > \frac{867}{554} > \frac{314}{216}$
1.838	1.724

5)	$\frac{771}{576} > \frac{364}{292} > \frac{570}{476} > \frac{704}{615}$
1.339	1.247

6)	$\frac{114}{251}$	21.05%	138
	0.454	->	263
		4.78%	0.525
7)	$\frac{180}{301}$	13.92%	158
	0.598	<-	276
		9.06%	0.572
8)	$\frac{161}{220}$	126.76%	71
	0.732	<-	109
		101.83%	0.651
9)	$\frac{272}{236}$	11.40%	303
	1.153	->	242
		2.54%	1.252
10)	$\frac{87}{54}$	165.52%	231
	1.611	->	140
		159.26%	1.650
11)	$\frac{239}{178}$	20.50%	288
	1.343	->	185
		3.93%	1.557
12)	$\frac{290}{167}$	107.14%	140
	1.737	<-	83
		101.20%	1.687
13)	$\frac{177}{166}$	38.42%	245
	1.066	->	213
		28.31%	1.150
14)	$\frac{224}{98}$	41.96%	318
	2.286	->	141
		43.88%	2.255
15)	$\frac{147}{274}$	17.60%	125
	0.536	<-	216
		26.85%	0.579

3 : 40

J/n
10/1

1)

$$\begin{array}{r} 308 \\ 328 \\ \hline 245 \\ \hline 209 \\ \hline 233 \\ \hline 223 \\ \hline 295 \\ \hline 263 \end{array}$$

$$\begin{array}{r} 4 \\ 1 \\ 3 \\ 2 \\ \hline > \quad > \quad > \quad > \end{array}$$

6)

$$\begin{array}{r} 192 \\ 271 \\ \hline < \end{array}$$

$$\begin{array}{r} 145 \\ 204 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 47 \\ 14 \\ 52 \\ \hline 120 \\ 146 \\ \hline 272 \\ 263 \\ \hline 248 \\ 229 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ 4 \\ 2 \\ 1 \\ \hline > \quad > \quad > \quad > \end{array}$$

8)

$$\begin{array}{r} 306 \\ 240 \\ \hline > \end{array}$$

$$\begin{array}{r} 64 \\ 54 \\ \hline 320 \\ 270 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 200 \\ 225 \\ \hline 45 \\ 48 \\ \hline 225 \\ 240 \\ \hline 209 \\ 192 \\ \hline 241 \\ 243 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 3 \\ 2 \\ 1 \\ \hline > \quad > \quad > \quad > \end{array}$$

9)

$$\begin{array}{r} 80 \\ 153 \\ \hline > \end{array}$$

$$\begin{array}{r} 38 \\ 81 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 308 \\ 88 \\ \hline < \end{array}$$

$$\begin{array}{r} 287 \\ 78 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 769 \\ 917 \\ \hline 726 \\ 971 \\ \hline 911 \\ 986 \\ \hline 274 \\ 340 \\ \hline 276 \\ 1020 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ 4 \\ 1 \\ 3 \\ \hline > \quad > \quad > \quad > \end{array}$$

11)

$$\begin{array}{r} 240 \\ 332 \\ \hline < \end{array}$$

$$\begin{array}{r} 185 \\ 253 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 343 \\ 438 \\ \hline 505 \\ 70675 \\ \hline 719 \\ 840 \\ \hline 893 \\ 912 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 1 \\ 3 \\ 2 \\ 1 \\ \hline > \quad > \quad > \quad > \quad > \end{array}$$

15)

$$\begin{array}{r} 165 \\ 242 \\ \hline < \end{array}$$

$$\begin{array}{r} 228 \\ 301 \\ \hline \end{array}$$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)	$\frac{245}{209} > \frac{295}{263} > \frac{233}{223} > \frac{308}{328}$	1.172	1.122	1.045	0.939
----	---	-------	-------	-------	-------

2)	$\frac{248}{229} > \frac{272}{263} > \frac{47}{52} > \frac{120}{146}$	1.083	1.034	0.904	0.822
----	---	-------	-------	-------	-------

3)	$\frac{209}{192} > \frac{241}{243} > \frac{45}{48} > \frac{200}{225}$	1.089	0.992	0.938	0.889
----	---	-------	-------	-------	-------

4)	$\frac{911}{986} > \frac{769}{917} > \frac{274}{340} > \frac{726}{971}$	0.924	0.839	0.806	0.748
----	---	-------	-------	-------	-------

5)	$\frac{893}{912} > \frac{719}{840} > \frac{343}{438} > \frac{505}{675}$	0.979	0.856	0.783	0.748
----	---	-------	-------	-------	-------

6)	$\frac{192}{271}$	32.41% <- 0.708	145 204 0.711
7)	$\frac{177}{187}$	32.84% 61.02% -> 0.947	285 287 0.993
8)	$\frac{306}{240}$	378.13% 344.44% -> 1.275	64 54 1.185
9)	$\frac{80}{153}$	110.53% 88.89% -> 0.523	38 81 0.469
10)	$\frac{308}{88}$	7.32% 12.82% -> 3.500	287 78 3.679
11)	$\frac{240}{332}$	29.73% 31.23% -> 0.723	185 253 0.731
12)	$\frac{18}{111}$	12.50% 21.98% -> 0.162	16 91 0.176
13)	$\frac{169}{173}$	63.31% 76.30% -> 0.977	276 305 0.905
14)	$\frac{243}{103}$	18.11% 15.53% -> 2.359	287 119 2.412
15)	$\frac{165}{242}$	38.18% 24.38% -> 0.682	228 301 0.757

3:55

d/b

10/2

1)

$$\begin{array}{r} 78 \\ \underline{-68} \\ 10 \\ > \end{array} \quad \begin{array}{r} 334 \\ \underline{-307} \\ 27 \\ > \end{array} \quad \begin{array}{r} 299 \\ \underline{-237} \\ 62 \\ > \end{array} \quad \begin{array}{r} 80 \\ \underline{-57} \\ 23 \\ > \end{array}$$

$$4 > 2 > /$$

6)

$$\begin{array}{r} 237 \\ \underline{-284} \\ 47 \\ > \end{array} \quad \begin{array}{r} 125 \\ \underline{-170} \\ 45 \\ > \end{array}$$

10/2

2)

$$\begin{array}{r} 246 \\ \underline{-178} \\ 68 \\ > \end{array} \quad \begin{array}{r} 327 \\ \underline{-189} \\ 38 \\ > \end{array} \quad \begin{array}{r} 241 \\ \underline{-152} \\ 89 \\ > \end{array} \quad \begin{array}{r} 276 \\ \underline{-143} \\ 133 \\ > \end{array}$$

$$4 > 2 > 3 > /$$

8)

$$\begin{array}{r} 194 \\ \underline{-218} \\ -24 \\ < \end{array} \quad \begin{array}{r} 320 \\ \underline{-339} \\ -19 \\ < \end{array}$$

10/2

3)

$$\begin{array}{r} 277 \\ \underline{-315} \\ -38 \\ > \end{array} \quad \begin{array}{r} 228 \\ \underline{-221} \\ 7 \\ > \end{array} \quad \begin{array}{r} 273 \\ \underline{-338} \\ -65 \\ > \end{array} \quad \begin{array}{r} 206 \\ \underline{-225} \\ -19 \\ > \end{array}$$

$$> / > 4 > 2$$

9)

$$\begin{array}{r} 118 \\ \underline{-99} \\ 19 \\ < \end{array} \quad \begin{array}{r} 223 \\ \underline{-165} \\ 58 \\ > \end{array}$$

10/2

10)

$$\begin{array}{r} 208 \\ \underline{-97} \\ 111 \\ < \end{array} \quad \begin{array}{r} 263 \\ \underline{-107} \\ 156 \\ > \end{array}$$

10/2

11)

$$\begin{array}{r} 257 \\ \underline{-47} \\ 210 \\ > \end{array} \quad \begin{array}{r} 197 \\ \underline{-38} \\ 159 \\ < \end{array}$$

10/2

12)

$$\begin{array}{r} 306 \\ \underline{-198} \\ 108 \\ < \end{array} \quad \begin{array}{r} 181 \\ \underline{-106} \\ 75 \\ > \end{array}$$

10/2

13)

$$\begin{array}{r} 39 \\ \underline{-134} \\ 95 \\ < \end{array} \quad \begin{array}{r} 58 \\ \underline{-172} \\ 114 \\ > \end{array}$$

10/2

14)

$$\begin{array}{r} 214 \\ \underline{-164} \\ 50 \\ < \end{array} \quad \begin{array}{r} 222 \\ \underline{-167} \\ 55 \\ > \end{array}$$

10/2

15)

$$\begin{array}{r} 324 \\ \underline{-276} \\ 48 \\ < \end{array} \quad \begin{array}{r} 220 \\ \underline{-164} \\ 56 \\ > \end{array}$$

10/2

4)

$$\cancel{545} \quad \cancel{743} \quad \cancel{561} \quad \cancel{558}$$

$$1 > 3 > 4 > 2$$

5)

$$\cancel{539} \quad \cancel{544} \quad \cancel{390} \quad \cancel{744.}$$

$$2 > 4 > 3 > 1$$

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problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

8/13
/ 0 / ~

1)	●		
80	>	299	>
57	237	68	307
1.404	1.262	1.147	1.088

2)	●	●	
276	>	327	>
143	189	152	178
1.930	1.730	1.586	1.382

3)	●	●	
228	>	206	>
221	225	315	338
1.032	0.916	0.879	0.808

4)	●	●	
545	>	558	>
137	155	221	185
3.978	3.600	3.362	3.032

5)	●	●	
744	>	539	>
724	591	493	796
1.028	0.912	0.791	0.683

6)	237	89.60%	125
	284	<-	170
	0.835	67.06%	0.735
7)	304	55.10%	196
	254	<-	177
	1.197	43.50%	1.107
8)	194	64.95%	320
	218	->	339
	0.890	55.50%	0.944
9)	118	88.98%	223
	99	->	165
	1.192	66.67%	1.352
10)	208	26.44%	263
	97	->	107
	2.144	10.31%	2.458
11)	257	30.46%	197
	47	<-	38
	5.468	23.68%	5.184
12)	306	69.06%	181
	198	<-	106
	1.545	86.79%	1.708
13)	39	48.72%	58
	134	->	172
	0.291	28.36%	0.337
14)	214	3.74%	222
	164	->	167
	1.305	1.83%	1.329
15)	324	47.27%	220
	276	<-	164
	1.174	68.29%	1.341

2/14

3

1)

129	172	281	200
171	261	340	324
<hr/>			
_____ > _____ > _____ > _____			

6)

139		266
158		294
<hr/>		

2)

341	332	270	56
298	329	298	67
<hr/>			
_____ > _____ > _____ > _____			

8)

214		291
235		275
<hr/>		

3)

184	115	64	274
153	106	44	218
<hr/>			
_____ > _____ > _____ > _____			

10)

245		136
201		104
<hr/>		

4)

741	870	809	621
935	937	916	875
<hr/>			
_____ > _____ > _____ > _____			

11)

195		240
92		129
<hr/>		

5)

554	579	811	469
356	465	690	349
<hr/>			
_____ > _____ > _____ > _____			

13)

86		144
119		204
<hr/>		

14)

170		182
277		304
<hr/>		

15)

308		248
281		201
<hr/>		

For each incorrect answer,
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6'00"~	: Need Work
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~4'00" : Superior	

1/4

1)

$$\frac{281}{340} > \frac{129}{171} > \frac{172}{261} > \frac{200}{324}$$

0.826

0.754

0.659

0.617

6)

139

158

0.880

91.37%

->

266

294

86.08%

->

0.905

2)

$$\frac{341}{298} > \frac{332}{329} > \frac{270}{298} > \frac{56}{67}$$

1.144

1.009

0.906

0.836

7)

302

301

1.003

11.03%

<-

272

294

2.38%

->

0.925

3)

$$\frac{64}{44} > \frac{274}{218} > \frac{184}{153} > \frac{115}{106}$$

1.455

1.257

1.203

1.085

8)

214

235

0.911

35.98%

->

291

275

17.02%

->

1.058

4)

$$\frac{870}{937} > \frac{809}{916} > \frac{741}{935} > \frac{621}{875}$$

0.928

0.883

0.793

0.710

11)

195

92

2.120

80.15%

->

240

129

40.22%

->

1.860

5)

$$\frac{554}{356} > \frac{469}{349} > \frac{579}{465} > \frac{811}{690}$$

1.556

1.344

1.245

1.175

12)

93

161

0.578

19.23%

->

78

141

14.18%

->

0.553

13)

86

119

0.723

67.44%

->

144

204

71.43%

->

0.706

14)

170

277

0.614

7.06%

->

182

304

9.75%

->

0.599

15)

308

281

1.096

24.19%

->

248

201

39.80%

->

1.234

J/J
4

1)

276	319	298	304
92	94	76	81
<hr/>			
_____ > _____ > _____ > _____			

6)

278	_____	302
276	_____	336
<hr/>		

2)

200	194	231	235
255	210	272	236
<hr/>			
_____ > _____ > _____ > _____			

7)

248	_____	193
298	_____	214
<hr/>		

3)

257	214	324	260
278	219	294	213
<hr/>			
_____ > _____ > _____ > _____			

8)

187	_____	75
339	_____	136
<hr/>		

10)

53	_____	40
33	_____	25
<hr/>		

11)

292	_____	84
319	_____	100
<hr/>		

12)

314	_____	175
229	_____	115
<hr/>		

4)

983	262	940	755
921	260	780	794
<hr/>			
_____ > _____ > _____ > _____			

13)

233	_____	103
223	_____	92
<hr/>		

14)

79	_____	56
75	_____	52
<hr/>		

5)

59	282	922	846
76	316	874	889
<hr/>			
_____ > _____ > _____ > _____			

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

J/Y

1)	$\frac{298}{76} > \frac{304}{81} > \frac{319}{94} > \frac{276}{92}$
3.921	3.753

2)	$\frac{235}{236} > \frac{194}{210} > \frac{231}{272} > \frac{200}{255}$
0.996	0.924

3)	$\frac{260}{213} > \frac{324}{294} > \frac{214}{219} > \frac{257}{278}$
1.221	1.102

4)	$\frac{940}{780} > \frac{983}{921} > \frac{262}{260} > \frac{755}{794}$
1.205	1.067

5)	$\frac{922}{874} > \frac{846}{889} > \frac{282}{316} > \frac{59}{76}$
1.055	0.952

6)	$\frac{278}{276} > \frac{276}{1.007}$
302	336
21.74%	0.899
8.63% ->	
28.50% <-	
39.25% <-	
149.33% <-	
149.26% <-	
98.06% <-	
32.50% <-	
32.00% <-	
247.62% <-	
79.43% <-	
126.21% <-	
142.39% <-	
41.07% <-	
44.23% <-	
461.02% <-	
475.86% <-	
4)	

$\gamma = 15$

1)
$$\begin{array}{r} 192 \\ - 200 \\ \hline 238 \end{array}$$

$$\begin{array}{r} 270 \\ - 258 \\ \hline 145 \end{array}$$

$$\begin{array}{r} 131 \\ - 145 \\ \hline 145 \end{array}$$

$\cancel{1} > \cancel{1} > \cancel{2} > \cancel{1} \cancel{4}$

2)
$$\begin{array}{r} 285 \\ - 305 \\ \hline 146 \end{array}$$

$$\begin{array}{r} 260 \\ - 218 \\ \hline 330 \end{array}$$

$4 > 2 > 1 > 6 \cancel{3}$

3)
$$\begin{array}{r} 181 \\ - 180 \\ \hline 147 \end{array}$$

$$\begin{array}{r} 242 \\ - 251 \\ \hline 310 \end{array}$$

$1 > 3 > 2 > 4$

4)
$$\begin{array}{r} 394 \\ - 490 \\ \hline 725 \end{array}$$

$$\begin{array}{r} 598 \\ - 899 \\ \hline 645 \end{array}$$

$2 > 1 > 4 > 3$

5)
$$\begin{array}{r} 294 \\ - 469 \\ \hline 263 \end{array}$$

$$\begin{array}{r} 330 \\ - 571 \\ \hline 570 \end{array}$$

$\cancel{2} > 1 > 4 > 2$

6)
$$\begin{array}{r} 334 \\ - 315 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 150 \\ - 154 \\ \hline \end{array}$

7)
$$\begin{array}{r} 63 \\ - 143 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 42 \\ - 102 \\ \hline \end{array}$

8)
$$\begin{array}{r} 182 \\ - 169 \\ \hline \end{array}$$
 $\boxed{<} \quad \begin{array}{r} 225 \\ - 186 \\ \hline \end{array}$

9)
$$\begin{array}{r} 194 \\ - 262 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 226 \\ - 335 \\ \hline \end{array}$

10)
$$\begin{array}{r} 140 \\ - 228 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 163 \\ - 273 \\ \hline \end{array}$

11)
$$\begin{array}{r} 137 \\ - 283 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 32 \\ - 73 \\ \hline \end{array}$

12)
$$\begin{array}{r} 186 \\ - 261 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 217 \\ - 320 \\ \hline \end{array}$

13)
$$\begin{array}{r} 170 \\ - 152 \\ \hline \end{array}$$
 $\boxed{>} \quad \begin{array}{r} 269 \\ - 242 \\ \hline \end{array}$

14)
$$\begin{array}{r} 283 \\ - 320 \\ \hline \end{array}$$
 $\boxed{<} \quad \begin{array}{r} 72 \\ - 76 \\ \hline \end{array}$

15)
$$\begin{array}{r} 103 \\ - 292 \\ \hline \end{array}$$
 $\boxed{<} \quad \begin{array}{r} 30 \\ - 76 \\ \hline \end{array}$

For each incorrect answer,
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problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

11/6
5

8/16
5

1)

$$\frac{200}{167} > \frac{270}{258} > \frac{131}{145} > \frac{192}{238}$$

1.198

1.047

0.903

0.807

2)

$$\frac{260}{218} > \frac{164}{146} > \frac{334}{330} > \frac{285}{305}$$

1.193

1.123

1.012

0.934

3)

$$\frac{181}{180} > \frac{242}{251} > \frac{147}{167} > \frac{253}{310}$$

1.006

0.964

0.880

0.816

4)

$$\frac{725}{860} > \frac{394}{490} > \frac{645}{878} > \frac{598}{899}$$

0.843

0.804

0.735

0.665

5)

$$\frac{263}{360} > \frac{570}{818} > \frac{294}{469} > \frac{330}{571}$$

0.731

0.697

0.627

0.578

6)

$$\frac{334}{315} < \frac{1.060}{1.060}$$

122.67%

<-

$\frac{150}{154}$

104.55%

<-

$\frac{0.974}{0.974}$

7)

$$\frac{63}{143} < \frac{0.441}{0.441}$$

50.00%

<-

$\frac{42}{102}$

40.20%

<-

$\frac{0.412}{0.412}$

8)

$$\frac{182}{169} > \frac{1.077}{1.077}$$

23.63%

>-

$\frac{225}{186}$

10.06%

>-

$\frac{1.210}{1.210}$

9)

$$\frac{194}{262} > \frac{0.740}{0.740}$$

16.49%

>-

$\frac{226}{335}$

27.86%

>-

$\frac{0.675}{0.675}$

10)

$$\frac{140}{228} > \frac{0.614}{0.614}$$

16.43%

>-

$\frac{163}{273}$

19.74%

>-

$\frac{0.597}{0.597}$

11)

$$\frac{137}{283} < \frac{0.484}{0.484}$$

328.13%

<-

$\frac{32}{73}$

287.67%

<-

$\frac{0.438}{0.438}$

12)

$$\frac{186}{261} > \frac{0.713}{0.713}$$

16.67%

>-

$\frac{217}{320}$

22.61%

>-

$\frac{0.678}{0.678}$

13)

$$\frac{170}{152} > \frac{1.118}{1.118}$$

58.24%

>-

$\frac{269}{242}$

59.21%

>-

$\frac{1.112}{1.112}$

14)

$$\frac{283}{320} < \frac{0.884}{0.884}$$

293.06%

<-

$\frac{72}{76}$

321.05%

<-

$\frac{0.947}{0.947}$

15)

$$\frac{103}{292} < \frac{0.353}{0.353}$$

243.33%

<-

$\frac{30}{76}$

284.21%

<-

$\frac{0.395}{0.395}$

3 : 43

8/17
10/6

1)

$$\begin{array}{r} 263 \\ 291 \\ \hline 164 \\ 150 \\ \hline 278 \\ 278 \\ \hline 189 \\ 197 \\ \hline \end{array}$$

$$\underline{4} > \underline{1} > \underline{2} > \underline{3}$$

2)

$$\begin{array}{r} 233 \\ 310 \\ \hline 157 \\ 195 \\ \hline 240 \\ 270 \\ \hline 78 \\ 111 \\ \hline \end{array}$$

$$\underline{3} > \underline{2} > \underline{1} > \underline{4}$$

3)

$$\begin{array}{r} 164 \\ 228 \\ \hline 259 \\ 312 \\ \hline 280 \\ 306 \\ \hline 166 \\ 253 \\ \hline \end{array}$$

$$\underline{3} > \underline{2} > \underline{1} > \underline{4}$$

~~4)~~

$$\begin{array}{r} 950 \\ 634 \\ \hline 546 \\ 394 \\ \hline 798 \\ 668 \\ \hline 969 \\ 769 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 557 \\ 521 \\ \hline 810 \\ 821 \\ \hline 811 \\ 712 \\ \hline 589 \\ 670 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{1} > \underline{4}$$

6)

$$\begin{array}{r} 218 \\ 264 \\ \hline \end{array} < \begin{array}{r} 165 \\ 188 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 220 \\ 241 \\ \hline \end{array} > \begin{array}{r} 286 \\ 334 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 130 \\ 278 \\ \hline \end{array} > \begin{array}{r} 117 \\ 263 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 192 \\ 137 \\ \hline \end{array} < \begin{array}{r} 325 \\ 203 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 106 \\ 132 \\ \hline \end{array} > \begin{array}{r} 219 \\ 307 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 293 \\ 343 \\ \hline \end{array} > \begin{array}{r} 178 \\ 232 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 78 \\ 287 \\ \hline \end{array} < \begin{array}{r} 156 \\ 146 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 224 \\ 67 \\ \hline \end{array} > \begin{array}{r} 125 \\ 38 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 138 \\ 36 \\ \hline \end{array} < \begin{array}{r} 251 \\ 61 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 109 \\ 310 \\ \hline \end{array} < \begin{array}{r} 117 \\ 310 \\ \hline \end{array}$$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{164}{150} > \frac{278}{278} > \frac{189}{197} > \frac{263}{291}$	1.093	1.000	0.959	0.904
----	---	-------	-------	-------	-------

2)	$\frac{240}{270} > \frac{157}{195} > \frac{233}{310} > \frac{78}{111}$	0.889	0.805	0.752	0.703
----	--	-------	-------	-------	-------

3)	$\frac{280}{306} > \frac{259}{312} > \frac{164}{228} > \frac{166}{253}$	0.915	0.830	0.719	0.656
----	---	-------	-------	-------	-------

4)	$\frac{950}{634} > \frac{546}{394} > \frac{969}{769} > \frac{798}{668}$	1.498	1.386	1.260	1.195
----	---	-------	-------	-------	-------

5)	$\frac{811}{712} > \frac{557}{521} > \frac{810}{821} > \frac{589}{670}$	1.139	1.069	0.987	0.879
----	---	-------	-------	-------	-------

6)	$\frac{218}{264}$	32.12%	<-	165	10/6
	0.826	40.43%	<-	188	
7)	$\frac{220}{241}$	30.00%	->	286	
	0.913	38.59%	->	334	
8)	$\frac{130}{278}$	11.11%	<-	117	
	0.468	5.70%	<-	263	
9)	$\frac{192}{137}$	69.27%	->	325	
	1.401	48.18%	->	203	
10)	$\frac{106}{132}$	106.60%	->	219	
	0.803	132.58%	->	307	
11)	$\frac{293}{343}$	64.61%	<-	178	
	0.854	47.84%	<-	232	
12)	$\frac{78}{287}$	95.00%	<-	40	
	0.272	96.58%	<-	146	
13)	$\frac{224}{67}$	79.20%	<-	125	
	3.343	76.32%	<-	38	
14)	$\frac{138}{36}$	81.88%	->	3.289	
	3.833	69.44%	->	251	
15)	$\frac{109}{310}$	7.34%	->	61	
	0.352	0.00%	->	4.115	
			117	310	
			0.377		

10/1

4:24

1) ~~193 62~~ ~~88 38~~ ~~230 24~~ ~~144 55~~

$$\begin{array}{r} 193 \\ \underline{-131} \\ 62 \end{array}$$

$$\begin{array}{r} 88 \\ \underline{-50} \\ 38 \end{array}$$

$$\begin{array}{r} 230 \\ \underline{-136} \\ 144 \end{array}$$

$$\begin{array}{r} 144 \\ \underline{-89} \\ 55 \end{array}$$

4 > 1 > 2 > 3

2) $\begin{array}{r} 257 \\ \underline{-221} \\ 36 \end{array}$ $\begin{array}{r} 303 \\ \underline{-275} \\ 28 \end{array}$ $\begin{array}{r} 267 \\ \underline{-218} \\ 49 \end{array}$ $\begin{array}{r} 314 \\ \underline{-320} \\ -6 \end{array}$

2 > 3 > 1 > 4

3) $\begin{array}{r} 166 \\ \underline{-279} \\ -113 \end{array}$ $\begin{array}{r} 111 \\ \underline{-245} \\ -134 \end{array}$ $\begin{array}{r} 183 \\ \underline{-321} \\ -138 \end{array}$ $\begin{array}{r} 119 \\ \underline{-242} \\ -123 \end{array}$

1 > 4 > 2 > 3

4) $\begin{array}{r} 477 \\ \underline{-398} \\ 79 \end{array}$ $\begin{array}{r} 783 \\ \underline{-605} \\ 178 \end{array}$ $\begin{array}{r} 866 \\ \underline{-842} \\ 24 \end{array}$ $\begin{array}{r} 801 \\ \underline{-702} \\ 99 \end{array}$

2 > 1 > 4 > 3

5) $\begin{array}{r} 238 \\ \underline{-351} \\ -113 \end{array}$ $\begin{array}{r} 742 \\ \underline{-779} \\ -37 \end{array}$ $\begin{array}{r} 682 \\ \underline{-870} \\ -188 \end{array}$ $\begin{array}{r} 807 \\ \underline{-916} \\ -109 \end{array}$

4 > 1 > 3 > 2

6) $\begin{array}{r} 140 \\ \underline{-307} \\ -167 \end{array}$ > $\begin{array}{r} 114 \\ \underline{-280} \\ -166 \end{array}$

7) $\begin{array}{r} 173 \\ \underline{-256} \\ -83 \end{array}$ < $\begin{array}{r} 201 \\ \underline{-297} \\ -96 \end{array}$

8) $\begin{array}{r} 180 \\ \underline{-90} \\ 90 \end{array}$ < $\begin{array}{r} 217 \\ \underline{-107} \\ 110 \end{array}$

9) $\begin{array}{r} 281 \\ \underline{-330} \\ -49 \end{array}$ > $\begin{array}{r} 114 \\ \underline{-146} \\ -32 \end{array}$

10) $\begin{array}{r} 28 \\ \underline{-210} \\ -182 \end{array}$ > $\begin{array}{r} 36 \\ \underline{-279} \\ -243 \end{array}$

11) $\begin{array}{r} 194 \\ \underline{-285} \\ -91 \end{array}$ < $\begin{array}{r} 170 \\ \underline{-226} \\ -56 \end{array}$

12) $\begin{array}{r} 276 \\ \underline{-213} \\ 63 \end{array}$ < $\begin{array}{r} 120 \\ \underline{-92} \\ 28 \end{array}$

13) $\begin{array}{r} 266 \\ \underline{-319} \\ -53 \end{array}$ < $\begin{array}{r} 153 \\ \underline{-180} \\ -27 \end{array}$

14) $\begin{array}{r} 245 \\ \underline{-132} \\ 113 \end{array}$ > $\begin{array}{r} 298 \\ \underline{-170} \\ 128 \end{array}$

15) $\begin{array}{r} 120 \\ \underline{-290} \\ -170 \end{array}$ < $\begin{array}{r} 146 \\ \underline{-319} \\ -173 \end{array}$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)
$\frac{88}{50} > \frac{230}{136} > \frac{144}{89} > \frac{193}{131}$
1.760
1.691
1.618
1.473

2)
$\frac{267}{218} > \frac{257}{221} > \frac{303}{275} > \frac{314}{320}$
1.225
1.163
1.102
0.981

3)
$\frac{166}{279} > \frac{183}{321} > \frac{119}{242} > \frac{111}{245}$
0.595
0.570
0.492
0.453

4)
$\frac{783}{605} > \frac{477}{398} > \frac{801}{702} > \frac{866}{842}$
1.294
1.198
1.141
1.029

5)
$\frac{742}{779} > \frac{807}{916} > \frac{682}{870} > \frac{238}{351}$
0.953
0.881
0.784
0.678

6)	140	22.81%	$\frac{114}{280}$
	307	<-	$\frac{0.407}{0.456}$
	0.456	9.64%	$\frac{0.407}{0.456}$
7)	173	16.18%	$\frac{201}{297}$
	256	->	$\frac{0.677}{0.676}$
	0.676	16.02%	$\frac{0.677}{0.676}$
8)	180	20.56%	$\frac{217}{107}$
	90	->	$\frac{2.028}{2.000}$
	2.000	18.89%	$\frac{2.028}{2.000}$
9)	281	146.49%	$\frac{114}{146}$
	330	<-	$\frac{0.781}{0.852}$
	0.852	126.03%	$\frac{0.781}{0.852}$
10)	28	28.57%	$\frac{36}{279}$
	210	->	$\frac{0.129}{0.133}$
	0.133	32.86%	$\frac{0.129}{0.133}$
11)	194	14.12%	$\frac{170}{226}$
	285	<-	$\frac{0.752}{0.681}$
	0.681	26.11%	$\frac{0.752}{0.681}$
12)	276	130.00%	$\frac{120}{92}$
	213	<-	$\frac{1.304}{1.296}$
	1.296	131.52%	$\frac{1.304}{1.296}$
13)	266	73.86%	$\frac{153}{180}$
	319	<-	$\frac{0.850}{0.834}$
	0.834	77.22%	$\frac{0.850}{0.834}$
14)	245	21.63%	$\frac{298}{170}$
	132	->	$\frac{1.753}{1.856}$
	1.856	28.79%	$\frac{1.753}{1.856}$
15)	120	21.67%	$\frac{146}{319}$
	290	->	$\frac{0.458}{0.414}$
	0.414	10.00%	$\frac{0.458}{0.414}$

~~1)~~

134	157	229	190
235	196	323	291

4 > 1 > 2 > 3

2)

114	250	189	285
111	258	173	241

3 > 4 > 2 > 1

3)

197	183	296	260
165	173	294	296

1 > 2 > 3 > 4

4)

695	987	680	756
613	908	715	630

2 > 3 > 4 > 1

5)

371	318	59	185
798	777	175	508

1 > 2 > 4 > 3

6)

224	170	127	177
126	38		

7)

242	171	88	67
		170	38

8)

266	195	162	232
		190	38

9)

320	233	132	179
		230	38

10)

100	60	153	282
		140	38

11)

259	117	37	91
		110	38

12)

127	338	104	41
		120	38

13)

248	178	252	325
		240	38

14)

148	299	160	90
		140	38

15)

333	311	91	96
		320	38

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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)						
157	>	229	>	190	>	134
196		323		291		235
0.801		0.709		0.653		0.570

2)						
285	>	189	>	114	>	250
241		173		111		258
1.183		1.092		1.027		0.969

3)						
197	>	183	>	296	>	260
165		173		294		296
1.194		1.058		1.007		0.878

4)						
756	>	695	>	987	>	680
630		613		908		715
1.200		1.134		1.087		0.951

5)						
371	>	318	>	185	>	59
798		777		508		175
0.465		0.409		0.364		0.337

6)	224	26.55%	177
	170	<-	127
	1.318	33.86%	1.394
		175.00%	
7)	242	<-	88
	171	<-	67
	1.415	155.22%	1.313
		14.66%	
8)	266	<-	232
	195	<-	162
	1.364	20.37%	1.432
		78.77%	
9)	320	<-	179
	233	<-	132
	1.373	76.52%	1.356
		182.00%	
10)	100	->	282
	60	->	153
	1.667	155.00%	1.843
		184.62%	
11)	259	<-	91
	117	<-	37
	2.214	216.22%	2.459
		209.76%	
12)	127	<-	41
	338	<-	104
	0.376	225.00%	0.394
		31.05%	
13)	248	->	325
	178	->	252
	1.393	41.57%	1.290
		64.44%	
14)	148	<-	90
	299	<-	160
	0.495	86.88%	0.563
		246.88%	
15)	333	<-	96
	311	<-	91
	1.071	241.76%	1.055

4: 15

1)

$$\begin{array}{r} 212 \\ 325 \\ \hline 168 \\ 240 \\ \hline 113 \\ 207 \\ \hline 181 \\ 306 \end{array}$$

$$\underline{2} > \underline{1} > \underline{4} > \underline{3}$$

~~210~~

2)

$$\begin{array}{r} 196 \\ 180 \\ \hline 32 \\ 30 \\ \hline 228 \\ 204 \\ \hline 124 \\ 132 \\ \hline 206 \\ 167 \end{array}$$

$$\underline{3} > \underline{2} > \underline{4} > \underline{1}$$

~~$$\begin{array}{r} 20 \\ 31 \\ \hline 298 \\ 269 \\ \hline 46 \\ 193 \\ \hline 80 \\ 235 \\ \hline 318 \\ 270 \\ \hline 339 \end{array}$$~~

$$\underline{4} > \underline{3} > \underline{1} > \underline{2}$$

4)

$$\begin{array}{r} 916 \\ 902 \\ \hline 489 \\ 553 \\ \hline 607 \\ 635 \\ \hline 164 \\ 207 \end{array}$$

$$\underline{1} > \underline{3} > \underline{2} > \underline{4}$$

~~$$\begin{array}{r} 150 \\ 144 \\ \hline 598 \\ 450 \\ \hline 220 \\ 160 \\ \hline 80 \end{array}$$~~

$$\underline{3} > \underline{1} > \underline{4} > \underline{2}$$

$$\underline{150} > \underline{1} > \underline{4} > \underline{2}$$

6)

$$\begin{array}{r} 154 \\ 220 \\ \hline \end{array} > \boxed{\quad} - \frac{87}{138}$$

7)

$$\begin{array}{r} 63 \\ 101 \\ \hline \end{array} < \boxed{\quad} - \frac{121}{173}$$

8)

$$\begin{array}{r} 137 \\ 28 \\ \hline \end{array} > \boxed{\quad} - \frac{62}{13}$$

9)

$$\begin{array}{r} 304 \\ 337 \\ \hline \end{array} < \boxed{\quad} - \frac{206}{202}$$

10)

$$\begin{array}{r} 224 \\ 149 \\ \hline \end{array} > \boxed{\quad} - \frac{131}{98}$$

11)

$$\begin{array}{r} 224 \\ 127 \\ \hline \end{array} > \boxed{\quad} - \frac{264}{164}$$

12)

$$\begin{array}{r} 316 \\ 84 \\ \hline \end{array} < \boxed{\quad} - \frac{275}{64}$$

13)

$$\begin{array}{r} 141 \\ 82 \\ \hline \end{array} > \boxed{\quad} - \frac{36}{23} = \frac{144}{14}$$

14)

~~$$\begin{array}{r} 93 \\ 204 \\ \hline 46 \\ 266 \\ \hline \end{array} < \boxed{\quad} - \frac{150}{317}$$~~

15)

$$\begin{array}{r} 186 \\ 97 \\ \hline \end{array} < \boxed{\quad} - \frac{285}{138}$$

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5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

19/P

1)

$$\frac{168}{240} > \frac{212}{325} > \frac{181}{306} > \frac{113}{207}$$

0.700	0.652	0.592	0.546
-------	-------	-------	-------

2)

$$\frac{206}{167} > \frac{228}{204} > \frac{32}{30} > \frac{124}{132}$$

1.234	1.118	1.067	0.939
-------	-------	-------	-------

3)

$$\frac{318}{235} > \frac{339}{270} > \frac{232}{193} > \frac{298}{269}$$

1.353	1.256	1.202	1.108
-------	-------	-------	-------

4)

$$\frac{916}{902} > \frac{607}{635} > \frac{489}{553} > \frac{164}{207}$$

1.016	0.956	0.884	0.792
-------	-------	-------	-------

5)

$$\frac{616}{394} > \frac{252}{174} > \frac{598}{450} > \frac{909}{745}$$

1.563	1.448	1.329	1.220
-------	-------	-------	-------

6)

$$\frac{154}{220}$$

0.700

7)

$$\frac{63}{101}$$

0.624

8)

$$\frac{137}{28}$$

4.893

9)

$$\frac{304}{337}$$

0.902

10)

$$\frac{224}{149}$$

1.503

11)

$$\frac{224}{127}$$

1.764

12)

$$\frac{316}{84}$$

3.762

13)

$$\frac{141}{82}$$

1.720

14)

$$\frac{93}{204}$$

0.456

15)

$$\frac{186}{97}$$

1.918

77.01%

<-

87

138

0.630

92.06%

->

121

173

0.699

120.97%

<-

62

13

4.769

115.38%

47.57%

<-

206

202

1.020

70.99%

<-

131

98

1.337

17.86%

->

264

164

1.610

14.91%

<-

275

64

4.297

291.67%

<-

36

23

1.565

61.29%

->

150

317

0.473

53.23%

->

285

138

2.065

4:48

1) $\begin{array}{r} 70 \\ 217 \quad 60 \\ \hline 186 \quad 211 \end{array}$ $\begin{array}{r} 80 \\ 182 \quad 334 \\ \hline 175 \quad 258 \end{array}$

$\underline{3} > \underline{1} > \underline{4} > \underline{2}$

2) $\begin{array}{r} 143 \quad 322 \quad 143 \quad 242 \\ \hline 166 \quad 323 \quad 194 \quad 308 \end{array}$

$\underline{2} > \underline{1} > \underline{4} > \underline{3}$

3) $\begin{array}{r} 43 \quad 110 \quad 90 \quad 160 \\ \hline 60 \quad 137 \quad 106 \quad 171 \end{array}$

$\underline{4} > \underline{3} > \underline{2} > \underline{1}$

4) $\begin{array}{r} 526 \quad 200 \quad 259 \quad 482 \\ \hline 957 \quad 302 \quad 527 \quad 757 \end{array}$

$\underline{3} > \underline{1} > \underline{4} > \underline{2}$

5) $\begin{array}{r} 305 \quad 472 \quad 258 \quad 173 \\ \hline 665 \quad 801 \quad 498 \quad 393 \end{array}$

$\underline{3} > \underline{1} > \underline{2} > \underline{4}$

6) $\begin{array}{r} 283 \quad > \quad 289 \\ \hline 230 \quad 255 \end{array}$

~~7)~~ $\begin{array}{r} 219 \quad > \quad 180 \\ \hline 302 \quad 126 \end{array}$

$\frac{26}{252} = \frac{180}{302.4}$

8) $\begin{array}{r} 313 \quad < \quad 205 \\ \hline 171 \quad 126 \end{array}$

9) $\begin{array}{r} 169 \quad < \quad 253 \\ \hline 254 \quad 334 \end{array}$

10) $\begin{array}{r} 137 \quad > \quad 266 \\ \hline 147 \quad 304 \end{array}$

11) $\begin{array}{r} 273 \quad < \quad 221 \\ \hline 311 \quad 261 \end{array}$

12) $\begin{array}{r} 257 \quad < \quad 195 \\ \hline 228 \quad 164 \end{array}$

13) $\begin{array}{r} 332 \quad < \quad 308 \\ \hline 250 \quad 211 \end{array}$

14) $\begin{array}{r} 286 \quad < \quad 330 \\ \hline 24 \quad 26 \end{array}$

15) $\begin{array}{r} 291 \quad < \quad 146 \\ \hline 117 \quad 51 \end{array}$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)			
211 151	> 334 258	> 217 186	> 182 175
1.397	1.295	1.167	1.040

2)			
322 323	> 143 166	> 242 308	> 143 194
0.997	0.861	0.786	0.737

3)			
160 171	> 90 106	> 110 137	> 43 60
0.936	0.849	0.803	0.717

4)			
200 302	> 482 757	> 526 957	> 259 527
0.662	0.637	0.550	0.491

5)			
472 801	> 258 498	> 305 665	> 173 393
0.589	0.518	0.459	0.440

6)	283 230 1.230	2.12% -> ->	289 255 1.133
7)	219 302 0.725	143.33% <- <-	90 126 0.714
8)	313 171 1.830	52.68% <- <-	205 126 1.627
9)	169 254 0.665	49.70% -> ->	253 334 0.757
10)	137 147 0.932	94.16% -> ->	266 304 0.875
11)	273 311 0.878	23.53% <- <-	221 261 0.847
12)	257 228 1.127	31.79% <- <-	195 164 1.189
13)	332 250 1.328	7.79% <- <-	308 211 1.460
14)	286 24 11.917	18.48% <- <-	330 26 12.692
15)	291 117 2.487	15.38% -> ->	146 51 2.863
		99.32% -> ->	
		8.33% -> ->	
		129.41% -> ->	

5:30

~~1)~~

$$\begin{array}{r} 73 \\ \underline{- 119} \\ 40 \end{array} \quad \begin{array}{r} 69 \\ \underline{- 101} \\ 30 \end{array} \quad \begin{array}{r} 258 \\ \underline{- 338} \\ 70 \end{array} \quad \begin{array}{r} 171 \\ \underline{- 265} \\ 90 \end{array}$$

4 > 2 > 1 > 3

~~2)~~

$$\begin{array}{r} 85 \\ \underline{- 206} \\ 121 \end{array} \quad \begin{array}{r} 66 \\ \underline{- 134} \\ 68 \end{array} \quad \begin{array}{r} 47 \\ \underline{- 104} \\ 43 \end{array} \quad \begin{array}{r} 110 \\ \underline{- 202} \\ 92 \end{array}$$

4 > 2 > 3 > 1

~~3)~~

$$\begin{array}{r} 168 \\ \underline{- 198} \\ 30 \end{array} \quad \begin{array}{r} 205 \\ \underline{- 203} \\ 2 \end{array} \quad \begin{array}{r} 217 \\ \underline{- 291} \\ 74 \end{array} \quad \begin{array}{r} 282 \\ \underline{- 319} \\ 37 \end{array}$$

3 > 1 > 4 > 2

~~4)~~

$$\begin{array}{r} 289 \\ \underline{- 245} \\ 44 \end{array} \quad \begin{array}{r} 789 \\ \underline{- 826} \\ 43 \end{array} \quad \begin{array}{r} 849 \\ \underline{- 807} \\ 42 \end{array} \quad \begin{array}{r} 538 \\ \underline{- 490} \\ 48 \end{array}$$

2 > 4 > 3 > 2

~~5)~~

$$\begin{array}{r} 984 \\ \underline{- 655} \\ 329 \end{array} \quad \begin{array}{r} 495 \\ \underline{- 393} \\ 102 \end{array} \quad \begin{array}{r} 649 \\ \underline{- 461} \\ 188 \end{array} \quad \begin{array}{r} 955 \\ \underline{- 610} \\ 345 \end{array}$$

2 > 4 > 3 > 1

6)

$$\begin{array}{r} 194 \\ \underline{- 281} \\ 87 \end{array} \quad \begin{array}{r} 116 \\ \underline{- 164} \\ 48 \end{array} \quad \begin{array}{r} 114 \\ \underline{- 240} \\ 126 \end{array}$$

7)

$$\begin{array}{r} 102 \\ \underline{- 280} \\ 178 \end{array} \quad \begin{array}{r} 34 \\ \underline{- 84} \\ 50 \end{array}$$

8)

$$\begin{array}{r} 174 \\ \underline{- 54} \\ 120 \end{array} \quad \begin{array}{r} 234 \\ \underline{- 78} \\ 156 \end{array}$$

9)

$$\begin{array}{r} 191 \\ \underline{- 286} \\ 195 \end{array} \quad \begin{array}{r} 316 \\ \underline{- 230} \\ 86 \end{array}$$

10)

$$\begin{array}{r} 276 \\ \underline{- 288} \\ 12 \end{array} \quad \begin{array}{r} 79 \\ \underline{- 73} \\ 6 \end{array}$$

11)

$$\begin{array}{r} 63 \\ \underline{- 21} \\ 42 \end{array} \quad \begin{array}{r} 190 \\ \underline{- 58} \\ 132 \end{array}$$

12)

$$\begin{array}{r} 225 \\ \underline{- 86} \\ 139 \end{array} \quad \begin{array}{r} 175 \\ \underline{- 70} \\ 105 \end{array}$$

13)

$$\begin{array}{r} 248 \\ \underline{- 235} \\ 13 \end{array} \quad \begin{array}{r} 234 \\ \underline{- 207} \\ 27 \end{array}$$

14)

$$\begin{array}{r} 269 \\ \underline{- 285} \\ 177 \end{array} \quad \begin{array}{r} 308 \\ \underline{- 198} \\ 110 \end{array}$$

15)

$$\begin{array}{r} 211 \\ \underline{- 132} \\ 79 \end{array} \quad \begin{array}{r} 184 \\ \underline{- 99} \\ 85 \end{array}$$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{258}{338} > \frac{69}{101} > \frac{171}{265} > \frac{73}{119}$		
0.763	0.683	0.645	0.613

2)	$\frac{110}{202} > \frac{66}{134} > \frac{47}{104} > \frac{85}{206}$		
0.545	0.493	0.452	0.413

3)	$\frac{205}{203} > \frac{282}{319} > \frac{168}{198} > \frac{217}{291}$		
1.010	0.884	0.848	0.746

4)	$\frac{289}{245} > \frac{538}{490} > \frac{849}{807} > \frac{789}{826}$		
1.180	1.098	1.052	0.955

5)	$\frac{955}{610} > \frac{984}{655} > \frac{649}{461} > \frac{495}{393}$		
1.566	1.502	1.408	1.260

6)	$\frac{194}{281}$	67.24%	116
	0.690	<-	164
		71.34%	0.707
7)	$\frac{102}{280}$	200.00%	34
	0.364	<-	84
		233.33%	0.405
8)	$\frac{174}{54}$	34.48%	234
	3.222	->	78
		44.44%	3.000
9)	$\frac{191}{140}$	65.45%	316
	1.364	->	230
		64.29%	1.374
10)	$\frac{276}{288}$	249.37%	79
	0.958	<-	73
		294.52%	1.082
11)	$\frac{63}{21}$	201.59%	190
	3.000	->	58
		176.19%	3.276
12)	$\frac{225}{86}$	28.57%	175
	2.616	<-	70
		22.86%	2.500
13)	$\frac{248}{235}$	5.98%	234
	1.055	<-	207
		13.53%	1.130
14)	$\frac{269}{177}$	14.50%	308
	1.520	->	198
		11.86%	1.556
15)	$\frac{211}{132}$	14.67%	184
	1.598	<-	99
		33.33%	1.859

3:50

1)

143	281	245	269
194	<u>278</u>	<u>279</u>	331

4 > 1 > 2 > 3

6)

54	122
108	228

↙ ↘ <

2)

106	59	62	90
307	218	216	274

1 > 4 > 3 > 2

7)

216	203
157	135

<

3)

294	195	319	87
129	97	177	54

1 > 2 > 3 > 4

10)

200	77
326	117

↙ ↘ <

4)

814	533	737	884
800	712	897	945

1 > 4 > 3 > 2

11)

150	304
100	207

↙ ↘ >

12)

253	149
332	214

>

13)

250	214
311	262

<

14)

84	137
171	240

<

15)

316	334
124	144

>

5)

641	134 ↗	585	789
795	181 ↗	647	800

4 > 3 > 2 > 1
7 > b ↗ > 2 > 1
b ↗
↖ ↘

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{281}{278} > \frac{245}{279} > \frac{269}{331} > \frac{143}{194}$
1.011	0.878
0.813	0.737

2)	$\frac{106}{307} > \frac{90}{274} > \frac{62}{216} > \frac{59}{218}$
0.345	0.328
0.287	0.271

3)	$\frac{294}{129} > \frac{195}{97} > \frac{319}{177} > \frac{87}{54}$
2.279	2.010
1.802	1.611

4)	$\frac{814}{800} > \frac{884}{945} > \frac{737}{897} > \frac{533}{712}$
1.018	0.935
0.822	0.749

5)	$\frac{789}{800} > \frac{585}{647} > \frac{641}{795} > \frac{134}{181}$
0.986	0.904
0.806	0.740

6)	$\frac{54}{108} > \frac{0.500}{0.535}$
125.93%	->
111.11%	->
6.40%	<-
16.30%	<-
156.16%	<-
153.91%	<-
25.00%	<-
36.73%	<-
159.74%	<-
178.63%	<-
102.67%	<-
69.80%	<-
55.14%	<-
16.82%	<-
18.70%	<-
63.10%	<-
40.35%	<-
5.70%	<-
16.13%	<-

1)

$$\begin{array}{r} 76 \\ 88 \\ \hline 151 \\ 141 \\ \hline 198 \\ 253 \\ \hline 139 \\ 146 \\ \hline \end{array}$$

3 > 1 > 4 > 2

6) 50
185

$$\begin{array}{r} 75 \\ 94 \\ \hline \end{array}$$

> 143
183

2)

$$\begin{array}{r} 284 \\ 120 \\ \hline 246 \\ 115 \\ \hline 335 \\ 170 \\ \hline 238 \\ 129 \\ \hline \end{array}$$

1 > 2 > 3 > 4

8)

$$\begin{array}{r} 155 \\ 152 \\ \hline \end{array}$$

< 76
69

3)

$$\begin{array}{r} 260 \\ 125 \\ \hline 267 \\ 116 \\ \hline 304 \\ 177 \\ \hline 305 \\ 162 \\ \hline \end{array}$$

2 > 1 > 4 > 3

9)

$$\begin{array}{r} 251 \\ 164 \\ \hline \end{array}$$

> 223
161

4)

$$\begin{array}{r} 434 \\ 405 \\ \hline 871 \\ 754 \\ \hline 914 \\ 945 \\ \hline 490 \\ 404 \\ \hline \end{array}$$

3 > 2 > 4 > 1

10)

$$\begin{array}{r} 214 \\ 271 \\ \hline \end{array}$$

< 157
175

5)

$$\begin{array}{r} 251 \\ 869 \\ \hline 231 \\ 913 \\ \hline 271 \\ 894 \\ \hline 150 \\ 431 \\ \hline \end{array}$$

7 > 4 > 2 > 1

11)

$$\begin{array}{r} 87 \\ 147 \\ \hline \end{array}$$

> 127
220

12)

$$\begin{array}{r} 163 \\ 248 \\ \hline \end{array}$$

OK 88
131 196
262

13)

$$\begin{array}{r} 134 \\ 100 \\ \hline \end{array}$$

> 244
198

14)

$$\begin{array}{r} 332 \\ 199 \\ \hline \end{array}$$

> 280
168
184

15)

$$\begin{array}{r} 102 \\ 124 \\ \hline \end{array}$$

> 219
295

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior



1)	$\frac{151}{141} > \frac{139}{146} > \frac{76}{88} > \frac{198}{253}$	1.071	0.952	0.864	0.783
----	---	-------	-------	-------	-------

2)	$\frac{284}{120} > \frac{246}{115} > \frac{335}{170} > \frac{238}{129}$	2.367	2.139	1.971	1.845
----	---	-------	-------	-------	-------

3)	$\frac{267}{116} > \frac{260}{125} > \frac{305}{162} > \frac{304}{177}$	2.302	2.080	1.883	1.718
----	---	-------	-------	-------	-------

4)	$\frac{490}{404} > \frac{871}{754} > \frac{434}{405} > \frac{914}{945}$	1.213	1.155	1.072	0.967
----	---	-------	-------	-------	-------

5)	$\frac{150}{431} > \frac{271}{894} > \frac{251}{869} > \frac{231}{913}$	0.348	0.303	0.289	0.253
----	---	-------	-------	-------	-------

6)	$\frac{75}{94} > \frac{0.798}{0.798}$	90.67%	->	$\frac{143}{183}$
7)	$\frac{223}{224} < \frac{0.996}{0.996}$	94.68%	->	$\frac{0.781}{0.781}$
8)	$\frac{155}{152} < \frac{1.020}{1.020}$	15.54%	<-	$\frac{193}{216}$
9)	$\frac{251}{164} < \frac{1.530}{1.530}$	3.70%	<-	$\frac{0.894}{0.894}$
10)	$\frac{214}{271} < \frac{0.790}{0.790}$	103.95%	<-	$\frac{76}{69}$
11)	$\frac{87}{147} < \frac{0.592}{0.592}$	12.56%	<-	$\frac{223}{161}$
12)	$\frac{163}{248} < \frac{0.657}{0.657}$	36.31%	<-	$\frac{157}{175}$
13)	$\frac{134}{100} < \frac{1.340}{1.340}$	54.86%	<-	$\frac{127}{220}$
14)	$\frac{332}{199} < \frac{1.668}{1.668}$	45.98%	<-	$\frac{88}{131}$
15)	$\frac{102}{124} < \frac{0.823}{0.823}$	85.23%	<-	$\frac{244}{198}$
		82.09%	<-	$\frac{1.232}{1.232}$
		18.57%	<-	$\frac{280}{168}$
		18.45%	<-	$\frac{1.667}{1.667}$
		114.71%	<-	$\frac{219}{295}$
		137.90%	<-	$\frac{0.742}{0.742}$

4, 16

1)

$$\begin{array}{r} 162 \\ 321 \\ \hline 143 \\ 257 \\ \hline 75 \\ 118 \\ \hline 227 \\ 331 \\ \hline \end{array}$$

$$\underline{4} > \underline{?} > \underline{2} > \underline{1}$$

2)

$$\begin{array}{r} 279 \\ 254 \\ \hline 325 \\ 272 \\ \hline 177 \\ 204 \\ \hline 296 \\ 311 \\ \hline \end{array}$$

$$\underline{2} > \underline{1} > \underline{4} > \underline{3}$$

3)

$$\begin{array}{r} 336 \\ 231 \\ \hline 260 \\ 200 \\ \hline 140 \\ 117 \\ \hline 234 \\ 217 \\ \hline \end{array}$$

$$\frac{286}{234}$$

$$\underline{1} > \underline{2} > \underline{3} > \underline{4}$$

4)

$$\begin{array}{r} 533 \\ 778 \\ \hline 468 \\ 555 \\ \hline 529 \\ 832 \\ \hline 428 \\ 557 \\ \hline \end{array}$$

$$\underline{3} > \underline{1} > \underline{4} > \underline{2}$$

5)

$$\begin{array}{r} 424 \\ 539 \\ \hline 412 \\ 571 \\ \hline 449 \\ 684 \\ \hline 554 \\ 637 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{4} > \underline{1}$$

6)

$$\begin{array}{r} 130 \\ 332 \\ \hline 48 \\ 116 \\ \hline 144 \\ 48 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 279 \\ 314 \\ \hline 234 \\ 240 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 124 \\ 110 \\ \hline 272 \\ 265 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 200 \\ 300 \\ \hline 113 \\ 175 \\ \hline 58 \\ 116 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 127 \\ 290 \\ \hline 160 \\ 321 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 158 \\ 104 \\ \hline 168 \\ 117 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 333 \\ 187 \\ \hline 170 \\ 102 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 142 \\ 126 \\ \hline 13 \\ 11 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 240 \\ 224 \\ \hline 287 \\ 237 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 190 \\ 173 \\ \hline 294 \\ 235 \\ \hline \end{array}$$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)	$\frac{227}{331} > \frac{75}{118} > \frac{143}{257} > \frac{162}{321}$
	0.686 0.636 0.556 0.505

2)	$\frac{325}{272} > \frac{279}{254} > \frac{296}{311} > \frac{177}{204}$
	1.195 1.098 0.952 0.868

3)	$\frac{336}{231} > \frac{26}{20} > \frac{140}{117} > \frac{234}{217}$
	1.455 1.300 1.197 1.078

4)	$\frac{468}{555} > \frac{428}{557} > \frac{533}{778} > \frac{529}{832}$
	0.843 0.768 0.685 0.636

5)	$\frac{554}{637} > \frac{424}{539} > \frac{412}{571} > \frac{449}{684}$
	0.870 0.787 0.722 0.656

6)	$\frac{130}{332}$	170.83% <- 48 116 0.414
	0.392	186.21%
7)	$\frac{279}{314}$	19.23% <- 234 240 0.975
	0.889	30.83%
8)	$\frac{124}{110}$	119.35% -> 272 265 1.026
	1.127	140.91%
9)	$\frac{200}{300}$	76.99% <- 113 175 0.646
	0.667	71.43%
10)	$\frac{127}{290}$	25.98% -> 160 321 0.498
	0.438	10.69%
11)	$\frac{158}{104}$	6.33% -> 168 117 1.436
	1.519	12.50%
12)	$\frac{333}{187}$	95.88% <- 170 102 1.667
	1.781	83.33%
13)	$\frac{142}{126}$	992.31% <- 13 11 1.182
	1.127	#####
14)	$\frac{240}{224}$	19.58% -> 287 237 1.211
	1.071	5.80%
15)	$\frac{190}{173}$	54.74% -> 294 235 1.251
	1.098	35.84%

매일 매일 하나씩, 자료해석 비타민!!!

4:15

1)

$$\begin{array}{r} 179 \\ 156 \\ \hline 229 \\ 145 \\ \hline 222 \\ 162 \\ \hline 227 \\ 188 \\ \hline \end{array}$$

4 > 1 > 2 > 3

2)

$$\begin{array}{r} 340 \\ 336 \\ \hline 196 \\ 221 \\ \hline 226 \\ 285 \\ \hline 282 \\ 242 \\ \hline \end{array}$$

2 > 3 > 4 > 1

3)

$$\begin{array}{r} 123 \\ 73 \\ \hline 237 \\ 180 \\ \hline 271 \\ 219 \\ \hline 106 \\ 71 \\ \hline \end{array}$$

— > — > — > —

4)

$$\begin{array}{r} 887 \\ 846 \\ \hline 835 \\ 718 \\ \hline 215 \\ 258 \\ \hline 754 \\ 796 \\ \hline \end{array}$$

2 > 1 > 4 > 3

5)

$$\begin{array}{r} 231 \\ 304 \\ \hline 584 \\ 658 \\ \hline 359 \\ 435 \\ \hline 879 \\ 929 \\ \hline \end{array}$$

4 > 2 > 7 > 1

6)

$$\begin{array}{r} 307 \\ 273 \\ \hline \end{array}$$

< > 305
266

7)

$$\begin{array}{r} 187 \\ 196 \\ \hline \end{array}$$

< > 267
269

8)

$$\begin{array}{r} 156 \\ 206 \\ \hline \end{array}$$

< > 156
185

9)

$$\begin{array}{r} 121 \\ 173 \\ \hline \end{array}$$

< > 170
232

10)

$$\begin{array}{r} 67 \\ 226 \\ \hline \end{array}$$

> > 88
327

11)

$$\begin{array}{r} 21 \\ 55 \\ \hline \end{array}$$

> > 110
321

12)

$$\begin{array}{r} 251 \\ 291 \\ \hline \end{array}$$

< > 200
233
251. 2

13)

$$\begin{array}{r} 33 \\ 53 \\ \hline \end{array}$$

< > 99
151

14)

$$\begin{array}{r} 264 \\ 339 \\ \hline \end{array}$$

> > 138
179

15)

$$\begin{array}{r} 170 \\ 55 \\ \hline \end{array}$$

> > 103
34
171

153
51

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5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)			
$\frac{229}{145} > \frac{222}{162} > \frac{227}{188} > \frac{179}{156}$			
1.579	1.370	1.207	1.147

2)			
$\frac{282}{242} > \frac{340}{336} > \frac{196}{221} > \frac{226}{285}$			
1.165	1.012	0.887	0.793

3)			
$\frac{123}{73} > \frac{106}{71} > \frac{237}{180} > \frac{271}{219}$			
1.685	1.493	1.317	1.237

4)			
$\frac{835}{718} > \frac{887}{846} > \frac{754}{796} > \frac{215}{258}$			
1.163	1.048	0.947	0.833

5)			
$\frac{879}{929} > \frac{584}{658} > \frac{359}{435} > \frac{231}{304}$			
0.946	0.888	0.825	0.760

6)	$\frac{307}{273}$	0.66%	305
	1.125	<-	266
		2.63%	1.147
7)	$\frac{187}{196}$	42.78%	267
	0.954	->	269
		37.24%	0.993
8)	$\frac{156}{206}$	0.00%	156
	0.757	->	185
		11.35%	0.843
9)	$\frac{121}{173}$	40.50%	170
	0.699	->	232
		34.10%	0.733
10)	$\frac{67}{226}$	31.34%	88
	0.296	->	327
		44.69%	0.269
11)	$\frac{21}{55}$	423.81%	110
	0.382	->	321
		483.64%	0.343
12)	$\frac{251}{291}$	25.50%	200
	0.863	->	233
		24.89%	0.858
13)	$\frac{33}{53}$	200.00%	99
	0.623	->	151
		184.91%	0.656
14)	$\frac{264}{339}$	91.30%	138
	0.779	->	179
		89.39%	0.771
15)	$\frac{170}{55}$	65.05%	103
	3.091	->	34
		61.76%	3.029

1)

$$\begin{array}{r} 341 \\ 215 \\ \hline 332 \\ 245 \\ \hline 275 \\ 186 \\ \hline 184 \\ 148 \\ \hline \end{array}$$

$$\underline{1} > \underline{3} > \underline{2} > \underline{4}$$

2)

$$\begin{array}{r} 89 \\ 104 \\ \hline 106 \\ 102 \\ \hline 336 \\ 283 \\ \hline 219 \\ 225 \\ \hline \end{array}$$

$$\underline{4} > \underline{2} > \underline{/} > \underline{3}$$

3)

$$\begin{array}{r} 317 \\ 325 \\ \hline 220 \\ 258 \\ \hline 199 \\ 192 \\ \hline 165 \\ 205 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{/} > \underline{4}$$

4)

$$\begin{array}{r} 43 \\ 52 \\ \hline 569 \\ 790 \\ \hline 443 \\ 476 \\ \hline 614 \\ 911 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{/} > \underline{4}$$

5)

$$\begin{array}{r} 897 \\ 932 \\ \hline 971 \\ 857 \\ \hline 880 \\ 710 \\ \hline 717 \\ 661 \\ \hline \end{array}$$

$$\underline{4} > \underline{2} > \underline{/} > \underline{3}$$

43

$$\begin{array}{r} 130 \\ 49 \\ \hline \cancel{130} \\ \cancel{49} \\ \hline 161 \\ 62 \\ \hline \end{array}$$

$$\begin{array}{r} 177 \\ 56 \\ \hline \boxed{>} \\ 114 \\ 39 \\ \hline \end{array}$$

$$\begin{array}{r} 330 \\ 254 \\ \hline \boxed{<} \\ 300 \\ 221 \\ \hline \end{array}$$

$$\begin{array}{r} 115 \\ 122 \\ \hline \boxed{>} \\ 194 \\ 209 \\ \hline \end{array}$$

$$\begin{array}{r} 153 \\ 203 \\ \hline \boxed{<} \\ 205 \\ 253 \\ \hline \end{array}$$

$$\begin{array}{r} 237 \\ 186 \\ \hline \boxed{>} \\ 299 \\ 251 \\ \hline \end{array}$$

$$\begin{array}{r} 155 \\ \cancel{27} \cancel{86} \\ \cancel{17} \cancel{86} \\ \hline \boxed{<} \\ 298 \\ 158 \\ \hline \end{array}$$

$$\begin{array}{r} 288 \\ 131 \\ \hline \boxed{<} \\ 254 \\ 104 \\ \hline \end{array}$$

$$\begin{array}{r} 305 \\ 206 \\ \hline \boxed{<} \\ 233 \\ 139 \\ \hline \end{array} \quad \begin{array}{l} 466 \\ 417 \end{array}$$

$$\begin{array}{r} 142 \\ 333 \\ \hline \boxed{>} \\ 103 \\ 273 \\ \hline \end{array}$$

For each incorrect answer,
15" is added
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problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{341}{215} > \frac{275}{186} > \frac{332}{245} > \frac{184}{148}$
	1.586 1.478 1.355 1.243

2)	$\frac{336}{283} > \frac{106}{102} > \frac{219}{225} > \frac{89}{104}$
	1.187 1.039 0.973 0.856

3)	$\frac{199}{192} > \frac{317}{325} > \frac{220}{258} > \frac{165}{205}$
	1.036 0.975 0.853 0.805

4)	$\frac{443}{476} > \frac{43}{52} > \frac{569}{790} > \frac{614}{911}$
	0.931 0.827 0.720 0.674

5)	$\frac{880}{710} > \frac{971}{857} > \frac{717}{661} > \frac{897}{932}$
	1.239 1.133 1.085 0.962

6)	$\frac{130}{49} > \frac{2.653}{2.653}$
	23.85% -> 161 62
7)	$\frac{177}{56} < \frac{3.161}{3.161}$
	26.53% -> 114 39
8)	$\frac{330}{254} < \frac{1.299}{1.299}$
	55.26% -< 300 221
9)	$\frac{115}{122} > \frac{0.943}{0.943}$
	10.00% -< 300 221
10)	$\frac{153}{203} > \frac{0.754}{0.754}$
	14.93% -> 205 253
11)	$\frac{237}{186} > \frac{1.274}{1.274}$
	68.70% -> 205 253
12)	$\frac{155}{86} > \frac{1.802}{1.802}$
	24.63% -> 298 158
13)	$\frac{288}{131} < \frac{2.198}{2.198}$
	26.16% -> 298 158
14)	$\frac{305}{206} < \frac{1.481}{1.481}$
	33.99% -< 254 104
15)	$\frac{142}{333} < \frac{0.426}{0.426}$
	71.31% -< 254 104
	92.26% -> 298 158
	13.39% -< 298 158
	30.90% -< 233 139
	48.20% -< 233 139
	37.86% -< 103 273
	21.98% -< 103 273



1)

138	202	260	284
133	145	227	215

4 > 1 > 3 > 2

6)

152	<	43	172
203		54	26

2)

71	171	121	229
71	213	111	254

2 > 4 > 1 > 3

8)

310	<	214	209
340		340	340

3)

339	254	340	275
244	198	310	230

1 > 2 > 4 > 3

10)

61	<	221	319
101		101	101

4)

187	137	851	406
115	92	600	301

1 > 4 > 2 > 3

11)

219	<	66	108
251		70	240

5)

663	740	826	643
455	347	433	386

4 > 1 > 2 > 3

12)

150	<	168	341
338		338	338

13)

36	<	255	152
23	,	23	152

14)

283	>	120	62
132		132	62

15)

133	>	200	137
80		80	137

For each incorrect answer,
15" is added
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problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)

$$\frac{202}{145} > \frac{284}{215} > \frac{260}{227} > \frac{138}{133}$$

1.393

1.321

1.145

1.038

2)

$$\frac{121}{111} > \frac{71}{71} > \frac{229}{254} > \frac{171}{213}$$

1.090

1.000

0.902

0.803

3)

$$\frac{339}{244} > \frac{254}{198} > \frac{275}{230} > \frac{340}{310}$$

1.389

1.283

1.196

1.097

4)

$$\frac{187}{115} > \frac{137}{92} > \frac{851}{600} > \frac{406}{301}$$

1.626

1.489

1.418

1.349

5)

$$\frac{740}{347} > \frac{826}{433} > \frac{643}{386} > \frac{663}{455}$$

2.133

1.908

1.666

1.457

6)

152

203

0.749

7)

268

196

1.367

8)

310

340

0.912

9)

156

219

0.712

10)

61

101

0.604

11)

219

251

0.873

12)

150

338

0.444

13)

36

23

1.565

14)

283

132

2.144

15)

133

80

1.663

253.49%

<-

43

<-

54

275.93%

7.46%

288

->

232

->

1.241

18.37%

<-

214

<-

209

62.68%

60.26%

>-

250

>-

338

54.34%

262.30%

>-

221

>-

319

215.84%

231.82%

<-

66

<-

70

0.943

12.00%

>-

168

>-

341

0.493

608.33%

>-

255

>-

152

560.87%

135.83%

>-

120

>-

62

1.935

50.38%

>-

200

>-

137

71.25%

>-

1.460

1)

$$\begin{array}{r} 206 \\ 122 \\ \hline 110 \\ 83 \\ \hline 245 \\ 162 \\ \hline 264 \\ 214 \\ \hline \end{array}$$

1 > 3 > 2 > 4

2)

$$\begin{array}{r} 186 \\ 160 \\ \hline 227 \\ 207 \\ \hline 281 \\ 327 \\ \hline 115 \\ 121 \\ \hline \end{array}$$

1 > 2 > 4 > 3

3)

$$\begin{array}{r} 232 \\ 326 \\ \hline 148 \\ 188 \\ \hline 113 \\ 177 \\ \hline 194 \\ 332 \\ \hline \end{array}$$

2 > 1 > 3 > 4

4)

$$\begin{array}{r} 799 \\ 914 \\ \hline 476 \\ 515 \\ \hline 947 \\ 917 \\ \hline 361 \\ 436 \\ \hline \end{array}$$

3 > 2 > 1 > 4

5)

$$\begin{array}{r} 625 \\ 705 \\ \hline 328 \\ 321 \\ \hline 473 \\ 555 \\ \hline 857 \\ 725 \\ \hline \end{array}$$

3 > 2 > 4 > 1

6)

$$\begin{array}{r} 278 \\ 306 \\ \hline \end{array}$$

> 287
325

7)

$$\begin{array}{r} 159 \\ 225 \\ \hline \end{array}$$

< 95
124

8)

$$\begin{array}{r} 169 \\ 73 \\ \hline \end{array}$$

> 333
151

9)

$$\begin{array}{r} 98 \\ 148 \\ \hline \end{array}$$

> 192
322

10)

$$\begin{array}{r} 88 \\ 245 \\ \hline \end{array}$$

> 116
323

11)

$$\begin{array}{r} 26 \\ 62 \\ \hline \end{array}$$

> 29
78

12)

$$\begin{array}{r} 221 \\ 222 \\ \hline \end{array}$$

< 309
286

13)

$$\begin{array}{r} 132 \\ 103 \\ \hline \end{array}$$

> 238
199

14)

$$\begin{array}{r} 131 \\ 184 \\ \hline \end{array}$$

> 177
257

15)

$$\begin{array}{r} 255 \\ 211 \\ \hline \end{array}$$

< 322
230

For each incorrect answer,
15" is added
to the time
taken to solve
problems

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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{206}{122} > \frac{245}{162} > \frac{110}{83} > \frac{264}{214}$	1.689	1.512	1.325	1.234
----	--	-------	-------	-------	-------

2)	$\frac{186}{160} > \frac{227}{207} > \frac{115}{121} > \frac{281}{327}$	1.163	1.097	0.950	0.859
----	---	-------	-------	-------	-------

3)	$\frac{148}{188} > \frac{232}{326} > \frac{113}{177} > \frac{194}{332}$	0.787	0.712	0.638	0.584
----	---	-------	-------	-------	-------

4)	$\frac{947}{917} > \frac{476}{515} > \frac{799}{914} > \frac{361}{436}$	1.033	0.924	0.874	0.828
----	---	-------	-------	-------	-------

5)	$\frac{857}{725} > \frac{328}{321} > \frac{625}{705} > \frac{473}{555}$	1.182	1.022	0.887	0.852
----	---	-------	-------	-------	-------

6)	$\frac{278}{306} > \frac{287}{325}$	0.908	3.24%	->	287
		0.908	6.21%	->	325
7)	$\frac{159}{225} < \frac{95}{124}$	0.707	67.37%	<-	95
		0.707	81.45%	<-	124
8)	$\frac{169}{73} > \frac{333}{151}$	2.315	97.04%	->	333
		2.315	106.85%	->	151
9)	$\frac{98}{148} > \frac{192}{322}$	0.662	95.92%	->	192
		0.662	117.57%	->	322
10)	$\frac{88}{245} > \frac{116}{323}$	0.359	31.82%	->	116
		0.359	31.84%	->	323
11)	$\frac{26}{62} > \frac{29}{78}$	0.419	11.54%	->	29
		0.419	25.81%	->	78
12)	$\frac{221}{222} > \frac{309}{286}$	0.995	39.82%	->	309
		0.995	28.83%	->	286
13)	$\frac{132}{103} > \frac{238}{199}$	1.282	80.30%	->	238
		1.282	93.20%	->	199
14)	$\frac{131}{184} > \frac{177}{257}$	0.712	35.11%	->	177
		0.712	39.67%	->	257
15)	$\frac{255}{211} > \frac{322}{230}$	1.209	26.27%	->	322
		1.209	9.00%	->	230

3:31

1)

$$\begin{array}{r} 227 \\ 200 \\ \hline 253 \end{array} \quad \begin{array}{r} 200 \\ 170 \\ \hline 172 \end{array} \quad \begin{array}{r} 170 \\ 299 \\ \hline 327 \end{array}$$

1 > 4 > 2 > 3

6) $\frac{236}{69} < \frac{335}{89}$

7) $\frac{204}{301} > \frac{67}{109} \approx 0.61$

2)

$$\begin{array}{r} 190 \\ 125 \\ \hline 77 \end{array} \quad \begin{array}{r} 148 \\ 114 \\ \hline 114 \end{array} \quad \begin{array}{r} 192 \\ 153 \\ \hline 153 \end{array}$$

4 > 1 > 3 > 2

8) $\frac{155}{247} > \frac{175}{287}$

9) $\frac{119}{338} < \frac{30}{82}$

3)

$$\begin{array}{r} 100 \\ 118 \\ \hline 166 \end{array} \quad \begin{array}{r} 171 \\ 299 \\ \hline 278 \end{array} \quad \begin{array}{r} 278 \\ 227 \\ \hline 287 \end{array}$$

3 > 1 > 2 > 4

10) $\frac{130}{117} > \frac{169}{157}$

11) $\frac{58}{257} < \frac{67}{258}$

4)

$$\begin{array}{r} 222 \\ 164 \\ \hline 356 \end{array} \quad \begin{array}{r} 516 \\ 479 \\ \hline 804 \end{array} \quad \begin{array}{r} 804 \\ 435 \\ \hline 566 \end{array}$$

3 > 8 > 1 > 2 > 4

12) $\frac{65}{305} > \frac{50}{265}$

5)

$$\begin{array}{r} 833 \\ 862 \\ \hline 702 \end{array} \quad \begin{array}{r} 731 \\ 639 \\ \hline 754 \end{array} \quad \begin{array}{r} 754 \\ 53 \\ \hline 59 \end{array}$$

4 > 3 > 1 > 2

13) $\frac{233}{213} < \frac{168}{135}$

14) $\frac{186}{303} > \frac{141}{235}$

15) $\frac{314}{265} > \frac{205}{188}$

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4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)			
$\frac{227}{200} > \frac{170}{172} > \frac{299}{327} > \frac{200}{253}$			
1.135	0.988	0.914	0.791

2)			
$\frac{148}{77} > \frac{277}{153} > \frac{192}{114} > \frac{190}{125}$			
1.922	1.810	1.684	1.520

3)			
$\frac{171}{166} > \frac{278}{299} > \frac{100}{118} > \frac{227}{287}$			
1.030	0.930	0.847	0.791

4)			
$\frac{804}{479} > \frac{516}{356} > \frac{222}{164} > \frac{566}{435}$			
1.678	1.449	1.354	1.301

5)			
$\frac{754}{639} > \frac{59}{53} > \frac{731}{702} > \frac{833}{862}$			
1.180	1.113	1.041	0.966

6)	$\frac{236}{69}$	41.95% -> ->	335 89 3.764
	3.420	28.99%	
7)	$\frac{204}{301}$	204.48% <- <-	67 109 0.615
	0.678	176.15%	
8)	$\frac{155}{247}$	12.90% -> ->	175 287 0.610
	0.628	16.19%	
9)	$\frac{119}{338}$	296.67% <- <-	30 82 0.366
	0.352	312.20%	
10)	$\frac{130}{117}$	30.00% -> ->	169 157 1.076
	1.111	34.19%	
11)	$\frac{58}{257}$	15.52% -> ->	67 258 0.260
	0.226	0.39%	
12)	$\frac{65}{305}$	30.00% <- <-	50 265 0.189
	0.213	15.09%	
13)	$\frac{233}{213}$	38.69% <- <-	168 135 1.244
	1.094	57.78%	
14)	$\frac{186}{303}$	31.91% <- <-	141 235 0.600
	0.614	28.94%	
15)	$\frac{314}{265}$	53.17% <- <-	205 188 1.090
	1.185	40.96%	

1)

73	69	258	171
119	101	338	265
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

6)

247	_____	255
275	_____	299
<hr/> <hr/>		

2)

85	66	47	110
206	134	104	202
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

8)

153	_____	179
234	_____	290
<hr/> <hr/>		

3)

168	205	217	282
198	203	291	319
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

10)

120	_____	224
165	_____	311
<hr/> <hr/>		

4)

289	789	849	538
245	826	807	490
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

11)

250	_____	317
190	_____	270
<hr/> <hr/>		

5)

984	495	649	955
655	393	461	610
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

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6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)

$$\frac{258}{338} > \frac{69}{101} > \frac{171}{265} > \frac{73}{119}$$

0.763	0.683	0.645	0.613
-------	-------	-------	-------

2)

$$\frac{110}{202} > \frac{66}{134} > \frac{47}{104} > \frac{85}{206}$$

0.545	0.493	0.452	0.413
-------	-------	-------	-------

3)

$$\frac{205}{203} > \frac{282}{319} > \frac{168}{198} > \frac{217}{291}$$

1.010	0.884	0.848	0.746
-------	-------	-------	-------

4)

$$\frac{289}{245} > \frac{538}{490} > \frac{849}{807} > \frac{789}{826}$$

1.180	1.098	1.052	0.955
-------	-------	-------	-------

5)

$$\frac{955}{610} > \frac{984}{655} > \frac{649}{461} > \frac{495}{393}$$

1.566	1.502	1.408	1.260
-------	-------	-------	-------

6)	247	3.24%	255
	275	->	299
	0.898	8.73%	0.853
7)	267	38.34%	193
	254	<-	189
	1.051	34.39%	1.021
8)	153	16.99%	179
	234	->	290
	0.654	23.93%	0.617
9)	168	71.43%	98
	239	<-	152
	0.703	57.24%	0.645
10)	120	86.67%	224
	165	->	311
	0.727	88.48%	0.720
11)	250	26.80%	317
	190	->	270
	1.316	42.11%	1.174
12)	245	18.93%	206
	342	<-	323
	0.716	5.88%	0.638
13)	241	37.76%	332
	229	->	333
	1.052	45.41%	0.997
14)	73	121.92%	162
	66	->	157
	1.106	137.88%	1.032
15)	136	106.06%	66
	306	<-	149
	0.444	105.37%	0.443

1)

318	154	259	279
251	153	277	252
<hr/>			
_____ > _____ > _____ > _____			

6)

166		279
164		278
<hr/>		

2)

318	301	213	235
226	164	132	157
<hr/>			
_____ > _____ > _____ > _____			

8)

333		81
84		22
<hr/>		

3)

218	142	315	136
244	170	334	136
<hr/>			
_____ > _____ > _____ > _____			

10)

263		139
194		99
<hr/>		

4)

351	209	215	434
579	316	291	812
<hr/>			
_____ > _____ > _____ > _____			

12)

82		334
59		231
<hr/>		

5)

836	436	691	519
639	391	718	415
<hr/>			
_____ > _____ > _____ > _____			

13)

225		205
254		251
<hr/>		

14)

49		100
119		266
<hr/>		

15)

148		212
216		299
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)						
318	>	279	>	154	>	259
251		252		153		277
1.267		1.107		1.007		0.935

2)						
301	>	213	>	235	>	318
164		132		157		226
1.835		1.614		1.497		1.407

3)						
136	>	315	>	218	>	142
136		334		244		170
1.000		0.943		0.893		0.835

4)						
215	>	209	>	351	>	434
291		316		579		812
0.739		0.661		0.606		0.534

5)						
836	>	519	>	436	>	691
639		415		391		718
1.308		1.251		1.115		0.962

6)	166	68.07%	279
	164	->	278
	1.012	69.51%	1.004
7)	81	186.42%	232
	105	->	261
	0.771	148.57%	0.889
8)	333	311.11%	81
	84	<-	22
	3.964	281.82%	3.682
9)	145	150.00%	58
	301	<-	121
	0.482	148.76%	0.479
10)	263	89.21%	139
	194	<-	99
	1.356	95.96%	1.404
11)	57	189.47%	165
	124	->	329
	0.460	165.32%	0.502
12)	82	307.32%	334
	59	->	231
	1.390	291.53%	1.446
13)	225	9.76%	205
	254	<-	251
	0.886	1.20%	0.817
14)	49	104.08%	100
	119	->	266
	0.412	123.53%	0.376
15)	148	43.24%	212
	216	->	299
	0.685	38.43%	0.709

3:26

26

1)

$\frac{150}{116}$	$\frac{108}{107}$	$\frac{247}{226}$	$\frac{319}{264}$
1	4	3	2
$1 > 4 > 3 > 2$			

2)

$\frac{236}{263}$	$\frac{110}{103}$	$\frac{256}{211}$	$\frac{329}{341}$
4	2	/	3
$4 > 2 > / > 3$			

3)

$\frac{54}{46}$	$\frac{57}{43}$	$\frac{89}{82}$	$\frac{270}{183}$
3	2	4	1
$3 > 2 > 4 > 1$			

4)

$\frac{929}{403}$	$\frac{768}{280}$	$\frac{104}{42}$	$\frac{696}{240}$
4	2	3	/
$4 > 2 > 3 > /$			

5)

$\frac{913}{959}$	$\frac{540}{598}$	$\frac{243}{307}$	$\frac{835}{991}$
1	2	4	3
$1 > 2 > 4 > 3$			

6)

$\frac{216}{312}$	>	$\frac{105}{161}$
-------------------	---	-------------------

7)

$\frac{29}{31}$	>	$\frac{138}{153}$
-----------------	---	-------------------

8)

$\frac{118}{314}$	<	$\frac{253}{335}$
-------------------	---	-------------------

9)

$\frac{274}{216}$	<	$\frac{322}{224}$
-------------------	---	-------------------

10)

$\frac{145}{78}$	<	$\frac{316}{165}$
------------------	---	-------------------

11)

$\frac{126}{92}$	>	$\frac{151}{117}$
------------------	---	-------------------

12)

$\frac{134}{149}$	<	$\frac{238}{246}$
-------------------	---	-------------------

13)

$\frac{68}{149}$	<	$\frac{169}{330}$
------------------	---	-------------------

14)

$\frac{58}{39}$	>	$\frac{248}{180}$
-----------------	---	-------------------

15)

$\frac{182}{220}$	<	$\frac{52}{64}$
-------------------	---	-----------------

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4'00"~4'30" : Excellent

~4'00" : Superior



1)

$$\frac{150}{116} > \frac{319}{264} > \frac{247}{226} > \frac{108}{107}$$

1.293	1.208	1.093	1.009
-------	-------	-------	-------

2)

$$\frac{256}{211} > \frac{110}{103} > \frac{329}{341} > \frac{236}{263}$$

1.213	1.068	0.965	0.897
-------	-------	-------	-------

3)

$$\frac{270}{183} > \frac{57}{43} > \frac{54}{46} > \frac{89}{82}$$

1.475	1.326	1.174	1.085
-------	-------	-------	-------

4)

$$\frac{696}{240} > \frac{768}{280} > \frac{104}{42} > \frac{929}{403}$$

2.900	2.743	2.476	2.305
-------	-------	-------	-------

5)

$$\frac{913}{959} > \frac{540}{598} > \frac{835}{991} > \frac{243}{307}$$

0.952	0.903	0.843	0.792
-------	-------	-------	-------

6)	216 312 0.692	105.71% <- 93.79%	105 161 0.652
7)	29 31 0.935	375.86% -> -> 393.55%	138 153 0.902
8)	118 157 0.752	114.41% -> -> 113.38%	253 335 0.755
9)	274 216 1.269	17.52% -> -> 3.70%	322 224 1.438
10)	145 78 1.859	117.93% -> -> 111.54%	316 165 1.915
11)	126 92 1.370	19.84% -> -> 27.17%	151 117 1.291
12)	134 149 0.899	77.61% -> -> 65.10%	238 246 0.967
13)	68 149 0.456	148.53% -> -> 121.48%	169 330 0.512
14)	58 39 1.487	327.59% -> -> 361.54%	248 180 1.378
15)	182 220 0.827	250.00% -< -< 243.75%	52 64 0.813

1)

$$\begin{array}{r} 66 \\ 96 \\ \hline 150 \\ 200 \\ \hline 143 \\ 175 \\ \hline 62 \\ 103 \\ \hline \end{array}$$

3 > 2 > 1 > 4

2)

$$\begin{array}{r} 185 \\ 108 \\ \hline 172 \\ 124 \\ \hline 235 \\ 147 \\ \hline 239 \\ 127 \\ \hline \end{array}$$

2 > 4 > 7 > 1

3)

$$\begin{array}{r} 108 \\ 170 \\ \hline 158 \\ 317 \\ \hline 198 \\ 292 \\ \hline 33 \\ 58 \\ \hline \end{array}$$

2 > 4 > 1 > 3

4)

$$\begin{array}{r} 884 \\ 737 \\ \hline 645 \\ 484 \\ \hline 485 \\ 379 \\ \hline 697 \\ 667 \\ \hline \end{array}$$

3 > 1 > 2 > 4

5)

$$\begin{array}{r} 901 \\ 424 \\ \hline 882 \\ 388 \\ \hline 408 \\ 215 \\ \hline 883 \\ 530 \\ \hline \end{array}$$

2 > 1 > 3 > 4

6)

$$\begin{array}{r} 189 \\ 211 \\ \hline \end{array} > \boxed{>} \begin{array}{r} 283 \\ 329 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 184 \\ 142 \\ \hline \end{array} < \boxed{<} \begin{array}{r} 156 \\ 132 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 263 \\ 230 \\ \hline \end{array} > \boxed{>} \begin{array}{r} 172 \\ 163 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 97 \\ 86 \\ \hline \end{array} < \boxed{<} \begin{array}{r} 278 \\ 240 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 185 \\ 262 \\ \hline \end{array} < \boxed{<} \begin{array}{r} 187 \\ 288 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 207 \\ 327 \\ \hline \end{array} < \boxed{<} \begin{array}{r} 88 \\ 123 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 99 \\ 105 \\ \hline \end{array} > \boxed{>} \begin{array}{r} 149 \\ 177 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 264 \\ 208 \\ \hline \end{array} > \boxed{>} \begin{array}{r} 132 \\ 105 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 127 \\ 154 \\ \hline \end{array} < \boxed{<} \begin{array}{r} 270 \\ 339 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 221 \\ 120 \\ \hline \end{array} < \boxed{<} \begin{array}{r} 295 \\ 162 \\ \hline \end{array}$$

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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{143}{175} > \frac{150}{200} > \frac{66}{96} > \frac{62}{103}$
	0.817 0.750 0.688 0.602

2)	$\frac{239}{127} > \frac{185}{108} > \frac{235}{147} > \frac{172}{124}$
	1.882 1.713 1.599 1.387

3)	$\frac{198}{292} > \frac{108}{170} > \frac{33}{58} > \frac{158}{317}$
	0.678 0.635 0.569 0.498

4)	$\frac{645}{484} > \frac{485}{379} > \frac{884}{737} > \frac{697}{667}$
	1.333 1.280 1.199 1.045

5)	$\frac{882}{388} > \frac{901}{424} > \frac{408}{215} > \frac{883}{530}$
	2.273 2.125 1.898 1.666

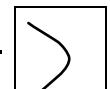
6)	$\frac{189}{211} > \frac{0.896}{0.860}$
	49.74% -> 283 329
7)	$\frac{184}{142} < \frac{1.296}{1.182}$
	55.92% -> 0.860 0.896
8)	$\frac{263}{230} < \frac{1.143}{1.055}$
	17.95% <- 156 132
9)	$\frac{97}{86} > \frac{1.128}{1.158}$
	52.91% <- 1.182 1.143
10)	$\frac{185}{262} > \frac{0.706}{0.649}$
	41.10% <- 172 163
11)	$\frac{207}{327} < \frac{0.633}{0.715}$
	186.60% <- 278 240
12)	$\frac{99}{105} > \frac{0.943}{0.842}$
	179.07% <- 1.158 1.128
13)	$\frac{264}{208} < \frac{1.269}{1.257}$
	1.08% <- 187 288
14)	$\frac{127}{154} > \frac{0.825}{0.796}$
	98.10% <- 149 177
15)	$\frac{221}{120} > \frac{1.842}{1.821}$
	135.23% <- 88 123
	100.00% <- 0.715 0.633
	50.51% <- 149 177
	68.57% <- 0.842 0.943
	112.60% <- 132 105
	120.13% <- 0.796 0.825
	33.48% <- 1.257 1.269
	35.00% <- 1.821 1.842

1)

$$\begin{array}{r} 103 \\ 135 \\ \hline 247 \\ 266 \\ \hline 202 \\ 234 \\ \hline 181 \\ 187 \\ \hline \end{array}$$

4 > 2 > 3 > 1

6)

$$\begin{array}{r} 315 \\ 266 \\ \hline \end{array}$$


$$\begin{array}{r} 233 \\ 218 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 70 \\ 113 \\ \hline 261 \\ 296 \\ \hline 150 \\ 189 \\ \hline 170 \\ 242 \\ \hline \end{array}$$

4 > 1 > 2 > 3

7)

$$\begin{array}{r} 30 \\ 29 \\ \hline \end{array}$$


$$\begin{array}{r} 310 \\ 305 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 184 \\ 264 \\ \hline 241 \\ 309 \\ \hline 172 \\ 193 \\ \hline 194 \\ 313 \\ \hline \end{array}$$

3 > 2 > 1 > 4

8)

$$\begin{array}{r} 142 \\ 116 \\ \hline \end{array}$$

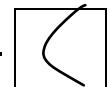

$$\begin{array}{r} 281 \\ 199 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 370 \\ 648 \\ \hline 365 \\ 490 \\ \hline 488 \\ 803 \\ \hline 604 \\ 879 \\ \hline \end{array}$$

4 > 1 > 3 > 2

9)

$$\begin{array}{r} 65 \\ 224 \\ \hline \end{array}$$


$$\begin{array}{r} 73 \\ 224 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 669 \\ 579 \\ \hline 560 \\ 437 \\ \hline 537 \\ 485 \\ \hline 577 \\ 432 \\ \hline \end{array}$$

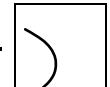
3 > 2 > 4 > 1

10)

$$\begin{array}{r} 143 \\ 84 \\ \hline \end{array}$$

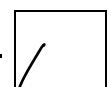

$$\begin{array}{r} 126 \\ 83 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 226 \\ 108 \\ \hline \end{array}$$


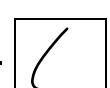
$$\begin{array}{r} 71 \\ 34 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 275 \\ 262 \\ \hline \end{array}$$


$$\begin{array}{r} 118 \\ 111 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 304 \\ 92 \\ \hline \end{array}$$


$$\begin{array}{r} 216 \\ 57 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 63 \\ 143 \\ \hline \end{array}$$


$$\begin{array}{r} 164 \\ 325 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 173 \\ 205 \\ \hline \end{array}$$


$$\begin{array}{r} 214 \\ 221 \\ \hline \end{array}$$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{181}{187} > \frac{247}{266} > \frac{202}{234} > \frac{103}{135}$
	0.968 0.929 0.863 0.763

2)	$\frac{261}{296} > \frac{150}{189} > \frac{170}{242} > \frac{70}{113}$
	0.882 0.794 0.702 0.619

3)	$\frac{172}{193} > \frac{241}{309} > \frac{184}{264} > \frac{194}{313}$
	0.891 0.780 0.697 0.620

4)	$\frac{365}{490} > \frac{604}{879} > \frac{488}{803} > \frac{370}{648}$
	0.745 0.687 0.608 0.571

5)	$\frac{577}{432} > \frac{560}{437} > \frac{669}{579} > \frac{537}{485}$
	1.336 1.281 1.155 1.107

6)	$\frac{315}{266} < \frac{233}{218}$
	1.184 22.02% 233 218
7)	$\frac{30}{29} > \frac{310}{305}$
	1.034 933.33% 310 305
8)	$\frac{142}{116} > \frac{281}{199}$
	1.224 951.72% 142 199
9)	$\frac{65}{224} < \frac{73}{224}$
	0.290 71.55% 65 73
10)	$\frac{143}{84} > \frac{126}{83}$
	1.702 12.31% 143 126
11)	$\frac{226}{108} > \frac{71}{34}$
	2.093 13.49% 226 71
12)	$\frac{275}{262} > \frac{118}{111}$
	1.050 218.31% 275 118
13)	$\frac{304}{92} > \frac{216}{57}$
	3.304 217.65% 304 216
14)	$\frac{63}{143} > \frac{164}{325}$
	0.441 133.05% 63 164
15)	$\frac{173}{205} > \frac{214}{221}$
	0.844 40.74% 173 214

1)

$$\begin{array}{r} 63 \\ 41 \\ \hline 251 \\ 170 \\ \hline 161 \\ 94 \\ \hline 144 \\ 88 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

2)

$$\begin{array}{r} 56 \\ 48 \\ \hline 110 \\ 117 \\ \hline 246 \\ 226 \\ \hline 84 \\ 93 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

3)

$$\begin{array}{r} 187 \\ 185 \\ \hline 153 \\ 169 \\ \hline 256 \\ 236 \\ \hline 298 \\ 254 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

4)

$$\begin{array}{r} 420 \\ 481 \\ \hline 293 \\ 315 \\ \hline 581 \\ 705 \\ \hline 719 \\ 944 \\ \hline \end{array}$$

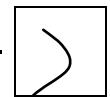
$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

5)

$$\begin{array}{r} 148 \\ 124 \\ \hline 927 \\ 719 \\ \hline 368 \\ 326 \\ \hline 953 \\ 971 \\ \hline \end{array}$$

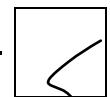
$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

6)

$$\begin{array}{r} 95 \\ 288 \\ \hline \end{array}$$


$$\begin{array}{r} 83 \\ 254 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 146 \\ 268 \\ \hline \end{array}$$


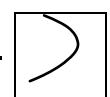
$$\begin{array}{r} 79 \\ 126 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 130 \\ 163 \\ \hline \end{array}$$


$$\begin{array}{r} 273 \\ 332 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 279 \\ 300 \\ \hline \end{array}$$


$$\begin{array}{r} 103 \\ 112 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 303 \\ 285 \\ \hline \end{array}$$


$$\begin{array}{r} 149 \\ 138 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 142 \\ 91 \\ \hline \end{array}$$


$$\begin{array}{r} 182 \\ 107 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 71 \\ 168 \\ \hline \end{array}$$


$$\begin{array}{r} 111 \\ 254 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 75 \\ 90 \\ \hline \end{array}$$


$$\begin{array}{r} 288 \\ 306 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 117 \\ 316 \\ \hline \end{array}$$


$$\begin{array}{r} 57 \\ 159 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 195 \\ 184 \\ \hline \end{array}$$


$$\begin{array}{r} 310 \\ 329 \\ \hline \end{array}$$

For each incorrect answer,
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problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{161}{94} > \frac{144}{88} > \frac{63}{41} > \frac{251}{170}$	1.713	1.636	1.537	1.476
----	---	-------	-------	-------	-------

2)	$\frac{56}{48} > \frac{246}{226} > \frac{110}{117} > \frac{84}{93}$	1.167	1.088	0.940	0.903
----	---	-------	-------	-------	-------

3)	$\frac{298}{254} > \frac{256}{236} > \frac{187}{185} > \frac{153}{169}$	1.173	1.085	1.011	0.905
----	---	-------	-------	-------	-------

4)	$\frac{293}{315} > \frac{420}{481} > \frac{581}{705} > \frac{719}{944}$	0.930	0.873	0.824	0.762
----	---	-------	-------	-------	-------

5)	$\frac{927}{719} > \frac{148}{124} > \frac{368}{326} > \frac{953}{971}$	1.289	1.194	1.129	0.981
----	---	-------	-------	-------	-------

6)	$\frac{95}{288} < \frac{0.330}{0.327}$	14.46%	<-	$\frac{83}{254}$	0.327
7)	$\frac{146}{268} < \frac{0.545}{0.627}$	13.39%	<-	$\frac{79}{126}$	0.627
8)	$\frac{130}{163} > \frac{0.798}{0.822}$	84.81%	<-	$\frac{273}{332}$	0.822
9)	$\frac{279}{300} < \frac{0.930}{0.920}$	110.00%	>-	$\frac{103}{112}$	0.920
10)	$\frac{303}{285} < \frac{1.063}{1.080}$	103.68%	<-	$\frac{149}{138}$	1.080
11)	$\frac{142}{91} > \frac{1.560}{1.701}$	170.87%	>-	$\frac{182}{107}$	1.701
12)	$\frac{71}{168} > \frac{0.423}{0.437}$	103.36%	<-	$\frac{111}{254}$	0.437
13)	$\frac{75}{90} > \frac{0.833}{0.941}$	284.00%	>-	$\frac{288}{306}$	0.941
14)	$\frac{117}{316} < \frac{0.370}{0.358}$	105.26%	<-	$\frac{57}{159}$	0.358
15)	$\frac{195}{184} > \frac{1.060}{0.942}$	98.74%	>-	$\frac{310}{329}$	0.942

1)

$$\begin{array}{r} 92 \\ 109 \\ \hline 215 \\ 240 \\ \hline 30 \\ 40 \\ \hline 261 \\ 323 \\ \hline \end{array}$$

2 > 1 > 4 > 3

2)

$$\begin{array}{r} 267 \\ 281 \\ \hline 273 \\ 339 \\ \hline 238 \\ 229 \\ \hline 258 \\ 306 \\ \hline \end{array}$$

2 > 4 > 1 > 3

3)

$$\begin{array}{r} 174 \\ 175 \\ \hline 245 \\ 294 \\ \hline 268 \\ 291 \\ \hline 110 \\ 140 \\ \hline \end{array}$$

1 > 3 > 2 > 4

4)

$$\begin{array}{r} 256 \\ 240 \\ \hline 503 \\ 491 \\ \hline 852 \\ 708 \\ \hline 492 \\ 547 \\ \hline \end{array}$$

2 > 7 > 1 > 4

5)

$$\begin{array}{r} 592 \\ 920 \\ \hline 324 \\ 387 \\ \hline 111 \\ 150 \\ \hline 611 \\ 897 \\ \hline \end{array}$$

4 > 1 > 2 > 3

6)

$$\begin{array}{r} 119 \\ 223 \\ \hline \end{array}$$

$$\begin{array}{r} 138 \\ 223 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 300 \\ 157 \\ \hline \end{array}$$

$$\begin{array}{r} 313 \\ 180 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 234 \\ 70 \\ \hline \end{array}$$

$$\begin{array}{r} 265 \\ 86 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 312 \\ 207 \\ \hline \end{array}$$

$$\begin{array}{r} 244 \\ 144 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 306 \\ 198 \\ \hline \end{array}$$

$$\begin{array}{r} 181 \\ 101 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 84 \\ 113 \\ \hline \end{array}$$

$$\begin{array}{r} 194 \\ 286 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 203 \\ 221 \\ \hline \end{array}$$

$$\begin{array}{r} 223 \\ 226 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 173 \\ 62 \\ \hline \end{array}$$

$$\begin{array}{r} 287 \\ 112 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 270 \\ 188 \\ \hline \end{array}$$

$$\begin{array}{r} 67 \\ 45 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 248 \\ 246 \\ \hline \end{array}$$

$$\begin{array}{r} 167 \\ 173 \\ \hline \end{array}$$

For each incorrect answer,
15" is added
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6'00"~ : Need Work

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5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)			
$\frac{215}{240} > \frac{92}{109} > \frac{261}{323} > \frac{30}{40}$			
0.896	0.844	0.808	0.750

2)			
$\frac{238}{229} > \frac{267}{281} > \frac{258}{306} > \frac{273}{339}$			
1.039	0.950	0.843	0.805

3)			
$\frac{174}{175} > \frac{268}{291} > \frac{245}{294} > \frac{110}{140}$			
0.994	0.921	0.833	0.786

4)			
$\frac{852}{708} > \frac{256}{240} > \frac{503}{491} > \frac{492}{547}$			
1.203	1.067	1.024	0.899

5)			
$\frac{324}{387} > \frac{111}{150} > \frac{611}{897} > \frac{592}{920}$			
0.837	0.740	0.681	0.643

6)	$\frac{119}{223}$	15.97%	138
	0.534	->	223
		0.00%	0.619
7)	$\frac{300}{157}$	4.33%	313
	1.911	->	180
		14.65%	1.739
8)	$\frac{234}{70}$	13.25%	265
	3.343	->	86
		22.86%	3.081
9)	$\frac{312}{207}$	27.87%	244
	1.507	<-	144
		43.75%	1.694
10)	$\frac{306}{198}$	69.06%	181
	1.545	<-	101
		96.04%	1.792
11)	$\frac{84}{113}$	130.95%	194
	0.743	->	286
		153.10%	0.678
12)	$\frac{203}{221}$	9.85%	223
	0.919	->	226
		2.26%	0.987
13)	$\frac{173}{62}$	65.90%	287
	2.790	->	112
		80.65%	2.563
14)	$\frac{270}{188}$	302.99%	67
	1.436	<-	45
		317.78%	1.489
15)	$\frac{248}{246}$	48.50%	167
	1.008	<-	173
		42.20%	0.965

1)

$$\begin{array}{r} 172 \\ 275 \\ \hline 245 \\ 309 \\ \hline 91 \\ 131 \\ \hline 256 \\ 293 \\ \hline \end{array}$$

4 > 2 > 3 > 1

6)

$$\begin{array}{r} 296 \\ 321 \\ \hline \end{array}$$

L 202
207

2)

$$\begin{array}{r} 231 \\ 180 \\ \hline 116 \\ 108 \\ \hline 292 \\ 238 \\ \hline 303 \\ 211 \\ \hline \end{array}$$

2 > 4 > 3 > 1

8)

$$\begin{array}{r} 303 \\ 329 \\ \hline \end{array}$$

D 259
291

3)

$$\begin{array}{r} 304 \\ 287 \\ \hline 197 \\ 199 \\ \hline 55 \\ 49 \\ \hline 283 \\ 241 \\ \hline \end{array}$$

Ø > 4 > 2 > Ø 1
3

10)

$$\begin{array}{r} 266 \\ 328 \\ \hline \end{array}$$

L 261
284

4)

$$\begin{array}{r} 440 \\ 704 \\ \hline 389 \\ 832 \\ \hline 204 \\ 418 \\ \hline 512 \\ 933 \\ \hline \end{array}$$

1 > 4 > 3 > 2

11)

$$\begin{array}{r} 208 \\ 127 \\ \hline \end{array}$$

C 241
135

5)

$$\begin{array}{r} 633 \\ 650 \\ \hline 956 \\ 885 \\ \hline 719 \\ 807 \\ \hline 478 \\ 609 \\ \hline \end{array}$$

2 > 1 > 3 > 4

12)

$$\begin{array}{r} 305 \\ 294 \\ \hline \end{array}$$

D 119
115

13)

$$\begin{array}{r} 18 \\ 62 \\ \hline \end{array}$$

D 96
337

14)

$$\begin{array}{r} 289 \\ 201 \\ \hline \end{array}$$

L 149
98

15)

$$\begin{array}{r} 56 \\ 193 \\ \hline \end{array}$$

D 50
189

For each incorrect answer,
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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)

$$\frac{256}{293} > \frac{245}{309} > \frac{91}{131} > \frac{172}{275}$$

0.874	0.793	0.695	0.625
-------	-------	-------	-------

2)

$$\frac{303}{211} > \frac{231}{180} > \frac{292}{238} > \frac{116}{108}$$

1.436	1.283	1.227	1.074
-------	-------	-------	-------

3)

$$\frac{283}{241} > \frac{55}{49} > \frac{304}{287} > \frac{197}{199}$$

1.174	1.122	1.059	0.990
-------	-------	-------	-------

4)

$$\frac{440}{704} > \frac{512}{933} > \frac{204}{418} > \frac{389}{832}$$

0.625	0.549	0.488	0.468
-------	-------	-------	-------

5)

$$\frac{956}{885} > \frac{633}{650} > \frac{719}{807} > \frac{478}{609}$$

1.080	0.974	0.891	0.785
-------	-------	-------	-------

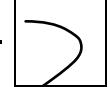
6)	<u>296</u>	46.53%	202
	<u>321</u>	<-	207
	0.922	55.07%	0.976
7)	<u>302</u>	34.82%	224
	<u>294</u>	<-	231
	1.027	27.27%	0.970
8)	<u>303</u>	16.99%	259
	<u>329</u>	<-	291
	0.921	13.06%	0.890
9)	<u>309</u>	36.73%	226
	<u>311</u>	<-	229
	0.994	35.81%	0.987
10)	<u>266</u>	1.92%	261
	<u>328</u>	<-	284
	0.811	15.49%	0.919
11)	<u>208</u>	15.87%	241
	<u>127</u>	->	135
	1.638	6.30%	1.785
12)	<u>305</u>	156.30%	119
	<u>294</u>	<-	115
	1.037	155.65%	1.035
13)	<u>18</u>	433.33%	337
	<u>62</u>	->	96
	0.290	443.55%	0.285
14)	<u>289</u>	93.96%	149
	<u>201</u>	<-	98
	1.438	105.10%	1.520
15)	<u>56</u>	12.00%	50
	<u>193</u>	<-	189
	0.290	2.12%	0.265

1)

$$\begin{array}{r} 214 \\ 201 \\ \hline 269 \\ 291 \\ \hline 274 \\ 324 \\ \hline 75 \\ 96 \\ \hline \end{array}$$

1 > 2 > 3 > 4

6)

$$\begin{array}{r} 125 \\ 212 \\ \hline \end{array}$$


$$\begin{array}{r} 24 \\ 44 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 341 \\ 226 \\ \hline 305 \\ 178 \\ \hline 293 \\ 225 \\ \hline 163 \\ 131 \\ \hline \end{array}$$

2 > 1 > 3 > 4

8)

$$\begin{array}{r} 166 \\ 299 \\ \hline \end{array}$$


$$\begin{array}{r} 138 \\ 250 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 319 \\ 272 \\ \hline 229 \\ 224 \\ \hline 34 \\ 35 \\ \hline 304 \\ 326 \\ \hline \end{array}$$

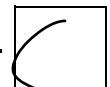
1 > 2 > 3 > 4

9)

$$\begin{array}{r} 269 \\ 196 \\ \hline \end{array}$$


$$\begin{array}{r} 324 \\ 218 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 323 \\ 250 \\ \hline \end{array}$$


$$\begin{array}{r} 263 \\ 188 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 986 \\ 925 \\ \hline 830 \\ 893 \\ \hline 567 \\ 413 \\ \hline 994 \\ 806 \\ \hline \end{array}$$

3 > 1 > 2 > 4

11)

$$\begin{array}{r} 290 \\ 250 \\ \hline \end{array}$$


$$\begin{array}{r} 146 \\ 142 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 114 \\ 100 \\ \hline \end{array}$$


$$\begin{array}{r} 298 \\ 239 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 497 \\ 514 \\ \hline 774 \\ 977 \\ \hline 571 \\ 625 \\ \hline 674 \\ 815 \\ \hline \end{array}$$

1 > 4 > 2 > 3

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4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{214}{201} > \frac{269}{291} > \frac{274}{324} > \frac{75}{96}$
201	291
1.065	0.924
0.846	0.781

2)	$\frac{305}{178} > \frac{341}{226} > \frac{293}{225} > \frac{163}{131}$
178	226
1.713	1.509
1.302	1.244

3)	$\frac{319}{272} > \frac{229}{224} > \frac{34}{35} > \frac{304}{326}$
272	224
1.173	1.022
0.971	0.933

4)	$\frac{567}{413} > \frac{994}{806} > \frac{986}{925} > \frac{830}{893}$
413	806
1.373	1.233
1.066	0.929

5)	$\frac{497}{514} > \frac{571}{625} > \frac{674}{815} > \frac{774}{977}$
514	625
0.967	0.914
0.827	0.792

6)	$\frac{125}{212} < \frac{24}{44}$
212	44
0.590	0.545
381.82%	
102.42%	
7)	$\frac{165}{101} > \frac{334}{191}$
101	191
1.634	1.749
89.11%	
20.29%	
8)	$\frac{166}{299} < \frac{138}{250}$
299	250
0.555	0.552
19.60%	
20.45%	
9)	$\frac{269}{196} > \frac{324}{218}$
196	218
1.372	1.486
11.22%	
22.81%	
10)	$\frac{323}{250} < \frac{263}{188}$
250	188
1.292	1.399
32.98%	
98.63%	
11)	$\frac{290}{250} < \frac{146}{142}$
250	142
1.160	1.028
76.06%	
161.40%	
12)	$\frac{114}{100} > \frac{298}{239}$
100	239
1.140	1.247
139.00%	
63.37%	
13)	$\frac{281}{286} < \frac{172}{159}$
286	159
0.983	1.082
79.87%	
30.57%	
14)	$\frac{229}{218} > \frac{299}{262}$
218	262
1.050	1.141
20.18%	
93.42%	
15)	$\frac{76}{126} > \frac{147}{250}$
126	250
0.603	0.588
98.41%	

3:08

1)

148	191	247	249
147	246	224	283
2	4	1	3
—————>	—————>	—————>	—————>

6)

154	>	303
108	—————	230

2)

191	125	204	149
287	213	278	236
2	4	1	3
—————>	—————>	—————>	—————>

8)

163	<	162
257	—————	228

3)

299	218	104	182
331	258	144	240
1	2	4	3
—————>	—————>	—————>	—————>

9)

231	>	116
51	—————	26
$\frac{23}{52}$		

4)

621	833	482	254
565	656	581	268
2	1	4	3
—————>	—————>	—————>	—————>

11)

191	<	158
340	—————	253
$\frac{20}{241}$		

5)

358	583	403	301
505	714	526	487
3	1	2	4
—————>	—————>	—————>	—————>

12)

98	>	79
215	—————	191

13)

148	<	256
84	—————	138
64 $\frac{20}{241}$		

14)

44	<	181
72	—————	280

15)

246	<	164
299	—————	178

For each incorrect answer,
15" is added
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problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{247}{224} > \frac{148}{147} > \frac{249}{283} > \frac{191}{246}$	1.103	1.007	0.880	0.776
----	---	-------	-------	-------	-------

2)	$\frac{204}{278} > \frac{191}{287} > \frac{149}{236} > \frac{125}{213}$	0.734	0.666	0.631	0.587
----	---	-------	-------	-------	-------

3)	$\frac{299}{331} > \frac{218}{258} > \frac{182}{240} > \frac{104}{144}$	0.903	0.845	0.758	0.722
----	---	-------	-------	-------	-------

4)	$\frac{833}{656} > \frac{621}{565} > \frac{254}{268} > \frac{482}{581}$	1.270	1.099	0.948	0.830
----	---	-------	-------	-------	-------

5)	$\frac{583}{714} > \frac{403}{526} > \frac{358}{505} > \frac{301}{487}$	0.817	0.766	0.709	0.618
----	---	-------	-------	-------	-------

6)	$\frac{154}{108} > \frac{1.426}{1.426}$	96.75%	->	303
		112.96%	->	230
7)	$\frac{273}{179} < \frac{1.525}{1.525}$	22.42%	<-	223
		19.33%	<-	150
8)	$\frac{163}{257} < \frac{0.634}{0.634}$	0.62%	<-	162
		12.72%	<-	228
9)	$\frac{231}{51} < \frac{4.529}{4.529}$	99.14%	<-	116
		96.15%	<-	26
10)	$\frac{158}{142} > \frac{1.113}{1.113}$	44.94%	->	229
		35.92%	->	193
11)	$\frac{191}{340} < \frac{0.562}{0.562}$	20.89%	<-	158
		34.39%	<-	253
12)	$\frac{98}{215} < \frac{0.456}{0.456}$	24.05%	<-	79
		12.57%	<-	191
13)	$\frac{148}{84} > \frac{1.762}{1.762}$	72.97%	->	256
		64.29%	->	138
14)	$\frac{44}{72} > \frac{0.611}{0.611}$	311.36%	->	181
		288.89%	->	280
15)	$\frac{246}{299} < \frac{0.823}{0.823}$	50.00%	<-	164
		67.98%	<-	178

1)

140	121	130	281
122	99	124	204
<hr/>			
_____ > _____ > _____ > _____			

6)

219		322
243		314
<hr/>		
_____ > _____ > _____ > _____		

2)

232	248	96	234
302	255	133	276
<hr/>			
_____ > _____ > _____ > _____			

8)

16		40
54		124
<hr/>		
_____ > _____ > _____ > _____		

3)

100	118	130	81
217	306	303	168
<hr/>			
_____ > _____ > _____ > _____			

10)

82		51
314		219
<hr/>		
_____ > _____ > _____ > _____		

4)

735	705	808	650
786	670	727	788
<hr/>			
_____ > _____ > _____ > _____			

12)

209		244
160		191
<hr/>		
_____ > _____ > _____ > _____		

5)

956	441	893	800
993	392	740	769
<hr/>			
_____ > _____ > _____ > _____			

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4'00"~4'30" : Excellent	
~4'00" : Superior	

1)			
$\frac{281}{204} > \frac{121}{99} > \frac{140}{122} > \frac{130}{124}$			
1.377	1.222	1.148	1.048

2)			
$\frac{248}{255} > \frac{234}{276} > \frac{232}{302} > \frac{96}{133}$			
0.973	0.848	0.768	0.722

3)			
$\frac{81}{168} > \frac{100}{217} > \frac{130}{303} > \frac{118}{306}$			
0.482	0.461	0.429	0.386

4)			
$\frac{808}{727} > \frac{705}{670} > \frac{735}{786} > \frac{650}{788}$			
1.111	1.052	0.935	0.825

5)			
$\frac{893}{740} > \frac{441}{392} > \frac{800}{769} > \frac{956}{993}$			
1.207	1.125	1.040	0.963

6)	$\frac{219}{243}$	47.03%	322
	0.901	->	314
		29.22%	1.025
7)	$\frac{167}{264}$	1.21%	165
	0.633	<-	232
		13.79%	0.711
8)	$\frac{16}{54}$	150.00%	40
	0.296	->	124
		129.63%	0.323
9)	$\frac{85}{92}$	124.71%	191
	0.924	->	209
		127.17%	0.914
10)	$\frac{82}{314}$	60.78%	51
	0.261	<-	219
		43.38%	0.233
11)	$\frac{261}{21}$	36.65%	191
	12.429	<-	15
		40.00%	12.733
12)	$\frac{209}{160}$	16.75%	244
	1.306	->	191
		19.38%	1.277
13)	$\frac{82}{275}$	41.46%	116
	0.298	->	340
		23.64%	0.341
14)	$\frac{125}{241}$	941.67%	12
	0.519	<-	24
		904.17%	0.500
15)	$\frac{49}{156}$	25.64%	39
	0.314	<-	126
		23.81%	0.310

1)

$\frac{19}{14}$	$\frac{312}{216}$	$\frac{168}{139}$	$\frac{307}{202}$
-----------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

6)

$\frac{252}{215}$	<input type="text"/>	$\frac{280}{229}$
-------------------	----------------------	-------------------

2)

$\frac{258}{267}$	$\frac{312}{268}$	$\frac{187}{215}$	$\frac{340}{323}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

8)

$\frac{310}{328}$	<input type="text"/>	$\frac{78}{94}$
-------------------	----------------------	-----------------

3)

$\frac{286}{214}$	$\frac{249}{168}$	$\frac{239}{188}$	$\frac{250}{150}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

9)

$\frac{307}{318}$	<input type="text"/>	$\frac{80}{89}$
-------------------	----------------------	-----------------

4)

$\frac{461}{405}$	$\frac{877}{966}$	$\frac{826}{799}$	$\frac{429}{358}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

10)

$\frac{235}{290}$	<input type="text"/>	$\frac{147}{189}$
-------------------	----------------------	-------------------

5)

$\frac{308}{368}$	$\frac{503}{577}$	$\frac{586}{789}$	$\frac{668}{990}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

11)

$\frac{22}{285}$	<input type="text"/>	$\frac{18}{260}$
------------------	----------------------	------------------

For each incorrect answer,
15" is added
to the time
taken to solve
problems

12)

$\frac{295}{111}$	<input type="text"/>	$\frac{185}{74}$
-------------------	----------------------	------------------

13)

$\frac{187}{137}$	<input type="text"/>	$\frac{166}{118}$
-------------------	----------------------	-------------------

14)

$\frac{94}{42}$	<input type="text"/>	$\frac{320}{131}$
-----------------	----------------------	-------------------

15)

$\frac{320}{340}$	<input type="text"/>	$\frac{254}{268}$
-------------------	----------------------	-------------------

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4'30"~5'00" : good

4'00"~4'30" : Excellent

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1)	$\frac{307}{202} > \frac{312}{216} > \frac{19}{14} > \frac{168}{139}$
1.520	1.444
1.357	1.209

2)	$\frac{312}{268} > \frac{340}{323} > \frac{258}{267} > \frac{187}{215}$
1.164	1.053
0.966	0.870

3)	$\frac{250}{150} > \frac{249}{168} > \frac{286}{214} > \frac{239}{188}$
1.667	1.482
1.336	1.271

4)	$\frac{429}{358} > \frac{461}{405} > \frac{826}{799} > \frac{877}{966}$
1.198	1.138
1.034	0.908

5)	$\frac{503}{577} > \frac{308}{368} > \frac{586}{789} > \frac{668}{990}$
0.872	0.837
0.743	0.675

6)	$\frac{252}{215} > \frac{1.172}{1.172}$	11.11% -> -> 6.51%	280 229 1.223
7)	$\frac{49}{44} > \frac{1.114}{1.114}$	10.20% -> -> 9.09%	54 48 1.125
8)	$\frac{310}{328} > \frac{0.945}{0.945}$	297.44% -< -< 248.94%	78 94 0.830
9)	$\frac{307}{318} > \frac{0.965}{0.965}$	283.75% -< -< 257.30%	80 89 0.899
10)	$\frac{235}{290} > \frac{0.810}{0.810}$	59.86% -< -< 53.44%	147 189 0.778
11)	$\frac{22}{285} > \frac{0.077}{0.077}$	22.22% -< -< 9.62%	18 260 0.069
12)	$\frac{295}{111} > \frac{2.658}{2.658}$	59.46% -< -< 50.00%	185 74 2.500
13)	$\frac{187}{137} > \frac{1.365}{1.365}$	12.65% -< -< 16.10%	166 118 1.407
14)	$\frac{94}{42} > \frac{2.238}{2.238}$	240.43% -> -> 211.90%	320 131 2.443
15)	$\frac{320}{340} > \frac{0.941}{0.941}$	25.98% -< -< 26.87%	254 268 0.948

1)

154	34	62	149
323	61	123	257
_____ > _____ > _____ > _____			

6)

54		44
30		23

2)

292	270	94	282
270	286	81	335
_____ > _____ > _____ > _____			

8)

153		54
282		107

3)

199	195	310	195
145	194	270	153
_____ > _____ > _____ > _____			

10)

110		322
40		103

4)

315	584	503	460
467	922	907	934
_____ > _____ > _____ > _____			

11)

52		80
194		332

5)

308	945	597	641
252	695	406	396
_____ > _____ > _____ > _____			

13)

79		315
45		180

14)

48		220
66		313

15)

162		212
202		301

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1)			
$\frac{149}{257} > \frac{34}{61} > \frac{62}{123} > \frac{154}{323}$			
0.580	0.557	0.504	0.477

2)			
$\frac{94}{81} > \frac{292}{270} > \frac{270}{286} > \frac{282}{335}$			
1.160	1.081	0.944	0.842

3)			
$\frac{199}{145} > \frac{195}{153} > \frac{310}{270} > \frac{195}{194}$			
1.372	1.275	1.148	1.005

4)			
$\frac{315}{467} > \frac{584}{922} > \frac{503}{907} > \frac{460}{934}$			
0.675	0.633	0.555	0.493

5)			
$\frac{641}{396} > \frac{597}{406} > \frac{945}{695} > \frac{308}{252}$			
1.619	1.470	1.360	1.222

6)	$\frac{54}{30}$	22.73% <- 44 23 1.913
	1.800	30.43%
7)	$\frac{258}{273}$	57.32% <- 164 196 0.837
	0.945	39.29%
8)	$\frac{153}{282}$	183.33% <- 54 107 0.505
	0.543	163.55%
9)	$\frac{290}{231}$	3.45% -> 300 256 1.172
	1.255	10.82%
10)	$\frac{110}{40}$	192.73% -> 322 103 3.126
	2.750	157.50%
11)	$\frac{52}{194}$	53.85% -> 80 332 0.241
	0.268	71.13%
12)	$\frac{178}{231}$	25.28% -> 223 305 0.731
	0.771	32.03%
13)	$\frac{79}{45}$	298.73% -> 315 180 1.750
	1.756	300.00%
14)	$\frac{48}{66}$	358.33% -> 220 313 0.703
	0.727	374.24%
15)	$\frac{162}{202}$	30.86% -> 212 301 0.704
	0.802	49.01%

1)

293	284	168	253
205	244	134	156
<hr/>			
_____ > _____ > _____ > _____			

6)

206		280
221		302
<hr/>		

2)

47	162	192	309
39	147	199	230
<hr/>			
_____ > _____ > _____ > _____			

8)

292		178
165		87
<hr/>		

3)

168	277	329	239
137	194	249	160
<hr/>			
_____ > _____ > _____ > _____			

10)

259		147
303		195
<hr/>		

4)

688	681	673	674
757	956	823	648
<hr/>			
_____ > _____ > _____ > _____			

11)

256		140
309		183
<hr/>		

5)

253	292	281	316
320	283	315	443
<hr/>			
_____ > _____ > _____ > _____			

12)

260		220
192		173
<hr/>		

13)

290		183
236		168
<hr/>		

14)

160		177
182		186
<hr/>		

15)

157		266
131		201
<hr/>		

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1)						
253	>	293	>	168	>	284
156		205		134		244
1.622		1.429		1.254		1.164

2)						
309	>	47	>	162	>	192
230		39		147		199
1.343		1.205		1.102		0.965

3)						
239	>	277	>	329	>	168
160		194		249		137
1.494		1.428		1.321		1.226

4)						
674	>	688	>	673	>	681
648		757		823		956
1.040		0.909		0.818		0.712

5)						
292	>	281	>	253	>	316
283		315		320		443
1.032		0.892		0.791		0.713

6)	206	35.92%	280
	221	->	302
	0.932	36.65%	0.927
7)	307	87.20%	164
	228	<-	105
	1.346	117.14%	1.562
8)	292	64.04%	178
	165	<-	87
	1.770	89.66%	2.046
9)	310	7.74%	334
	236	->	261
	1.314	10.59%	1.280
10)	259	76.19%	147
	303	<-	195
	0.855	55.38%	0.754
11)	256	82.86%	140
	309	<-	183
	0.828	68.85%	0.765
12)	260	18.18%	220
	192	<-	173
	1.354	10.98%	1.272
13)	290	58.47%	183
	236	<-	168
	1.229	40.48%	1.089
14)	160	10.63%	177
	182	->	186
	0.879	2.20%	0.952
15)	157	69.43%	266
	131	->	201
	1.198	53.44%	1.323

1)

161	142	142	200
337	206	257	320
_____ > _____ > _____ > _____			

6)

287		264
282		266

2)

73	69	258	171
119	101	338	265
_____ > _____ > _____ > _____			

8)

278		166
326		206

3)

85	66	47	110
206	134	104	202
_____ > _____ > _____ > _____			

9)

225		295
94		110

4)

479	589	628	821
570	584	845	930
_____ > _____ > _____ > _____			

10)

295		153
303		158

5)

289	789	849	538
245	826	807	490
_____ > _____ > _____ > _____			

11)

175		298
57		88

12)

264		200
328		237

13)

327		333
280		283

14)

144		114
147		127

15)

146		241
207		328

For each incorrect answer,
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4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{142}{206} > \frac{200}{320} > \frac{142}{257} > \frac{161}{337}$
	0.689 0.625 0.553 0.478

2)	$\frac{258}{338} > \frac{69}{101} > \frac{171}{265} > \frac{73}{119}$
	0.763 0.683 0.645 0.613

3)	$\frac{110}{202} > \frac{66}{134} > \frac{47}{104} > \frac{85}{206}$
	0.545 0.493 0.452 0.413

4)	$\frac{589}{584} > \frac{821}{930} > \frac{479}{570} > \frac{628}{845}$
	1.009 0.883 0.840 0.743

5)	$\frac{289}{245} > \frac{538}{490} > \frac{849}{807} > \frac{789}{826}$
	1.180 1.098 1.052 0.955

6)	$\frac{287}{282} < \frac{264}{266}$
	1.018 0.992
7)	$\frac{243}{287} < \frac{134}{163}$
	0.847 0.822
8)	$\frac{278}{326} < \frac{166}{206}$
	0.853 0.806
9)	$\frac{225}{94} > \frac{295}{110}$
	2.394 2.682
10)	$\frac{295}{303} < \frac{153}{158}$
	0.974 0.968
11)	$\frac{175}{57} > \frac{298}{88}$
	3.070 3.386
12)	$\frac{264}{328} < \frac{200}{237}$
	0.805 0.844
13)	$\frac{327}{280} > \frac{333}{283}$
	1.168 1.177
14)	$\frac{144}{147} < \frac{114}{127}$
	0.980 0.898
15)	$\frac{146}{207} > \frac{241}{328}$
	0.705 0.735

1)

126	106	168	90
236	207	299	145
<hr/>			
_____ > _____ > _____ > _____			

6)

97		251
50		142
<hr/>		

2)

308	252	155	120
333	329	154	149
<hr/>			
_____ > _____ > _____ > _____			

8)

127		112
153		138
<hr/>		

3)

220	141	128	201
241	203	160	313
<hr/>			
_____ > _____ > _____ > _____			

10)

94		168
138		267
<hr/>		

4)

384	853	210	661
380	960	220	832
<hr/>			
_____ > _____ > _____ > _____			

12)

192		128
302		192
<hr/>		

5)

719	544	240	464
920	923	372	646
<hr/>			
_____ > _____ > _____ > _____			

13)

53		56
300		307
<hr/>		

14)

107		221
40		84
<hr/>		

15)

142		116
102		74
<hr/>		

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4'00"~4'30" : Excellent

~4'00" : Superior

1)
$\frac{90}{145} > \frac{168}{299} > \frac{126}{236} > \frac{106}{207}$
0.621
0.562
0.534
0.512

6)	97	158.76%	251
	50	->	142
	1.940	184.00%	1.768

2)
$\frac{155}{154} > \frac{308}{333} > \frac{120}{149} > \frac{252}{329}$
1.006
0.925
0.805
0.766

7)	6	866.67%	58
	38	->	328
	0.158	763.16%	0.177

3)
$\frac{220}{241} > \frac{128}{160} > \frac{141}{203} > \frac{201}{313}$
0.913
0.800
0.695
0.642

8)	127	13.39%	112
	153	<-	138
	0.830	10.87%	0.812

4)
$\frac{384}{380} > \frac{210}{220} > \frac{853}{960} > \frac{661}{832}$
1.011
0.955
0.889
0.794

10)	94	78.72%	168
	138	->	267
	0.681	93.48%	0.629

5)
$\frac{719}{920} > \frac{464}{646} > \frac{240}{372} > \frac{544}{923}$
0.782
0.718
0.645
0.589

11)	267	15.58%	231
	325	<-	287
	0.822	13.24%	0.805

12)	192	50.00%	128
	302	<-	192
	0.636	57.29%	0.667

13)	53	5.66%	56
	300	->	307
	0.177	2.33%	0.182

14)	107	106.54%	221
	40	->	84
	2.675	110.00%	2.631

15)	142	22.41%	116
	102	<-	74
	1.392	37.84%	1.568

1)

237	264	309	132
264	335	304	186
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

6)

175	_____	202
135	_____	174
<hr/>		

7)

47	_____	109
107	_____	233
<hr/>		

2)

181	138	274	56
148	141	257	60
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

8)

44	_____	49
273	_____	342
<hr/>		

9)

148	_____	172
195	_____	229
<hr/>		

3)

141	177	195	70
256	261	319	90
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

10)

251	_____	131
268	_____	144
<hr/>		

11)

121	_____	215
76	_____	129
<hr/>		

4)

752	587	275	583
698	687	300	584
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

12)

206	_____	306
224	_____	325
<hr/>		

5)

718	781	606	721
882	836	935	963
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{309}{304} > \frac{237}{264} > \frac{264}{335} > \frac{132}{186}$	1.016	0.898	0.788	0.710
----	---	-------	-------	-------	-------

2)	$\frac{181}{148} > \frac{274}{257} > \frac{138}{141} > \frac{56}{60}$	1.223	1.066	0.979	0.933
----	---	-------	-------	-------	-------

3)	$\frac{70}{90} > \frac{177}{261} > \frac{195}{319} > \frac{141}{256}$	0.778	0.678	0.611	0.551
----	---	-------	-------	-------	-------

4)	$\frac{752}{698} > \frac{583}{584} > \frac{275}{300} > \frac{587}{687}$	1.077	0.998	0.917	0.854
----	---	-------	-------	-------	-------

5)	$\frac{781}{836} > \frac{718}{882} > \frac{721}{963} > \frac{606}{935}$	0.934	0.814	0.749	0.648
----	---	-------	-------	-------	-------

6)	$\frac{175}{135} > \frac{135}{1.296}$	15.43%	->	$\frac{202}{174}$	1.161
7)	$\frac{47}{107} > \frac{107}{0.439}$	28.89%	->	$\frac{109}{233}$	0.468
8)	$\frac{44}{273} > \frac{273}{0.161}$	131.91%	->	$\frac{49}{342}$	0.143
9)	$\frac{148}{195} > \frac{195}{0.759}$	117.76%	->	$\frac{172}{229}$	0.751
10)	$\frac{251}{268} > \frac{268}{0.937}$	11.36%	->	$\frac{131}{144}$	0.910
11)	$\frac{121}{76} > \frac{76}{1.592}$	86.11%	<-	$\frac{215}{129}$	1.667
12)	$\frac{206}{224} > \frac{224}{0.920}$	77.69%	->	$\frac{306}{325}$	0.942
13)	$\frac{52}{134} > \frac{134}{0.388}$	48.54%	->	$\frac{149}{332}$	0.449
14)	$\frac{80}{332} > \frac{332}{0.241}$	186.54%	<-	$\frac{42}{189}$	0.222
15)	$\frac{257}{183} > \frac{183}{1.404}$	90.48%	<-	$\frac{255}{173}$	1.474

1)

$$\begin{array}{r} 17 \\ \times 15 \\ \hline 15 & 75 \\ & 48 \\ \hline & 50 \\ & 237 \\ \hline & 175 \end{array}$$

_____ > _____ > _____ > _____

6)

$$\begin{array}{r} 121 \\ \times 119 \\ \hline 119 & 121 \\ & 289 \\ \hline & 296 \end{array}$$

2)

$$\begin{array}{r} 99 \\ \times 133 \\ \hline 323 & 296 \\ & 99 \\ \hline & 83 \\ & 71 \\ \hline & 72 \end{array}$$

_____ > _____ > _____ > _____

8)

$$\begin{array}{r} 54 \\ \times 155 \\ \hline 155 & 54 \\ & 86 \\ \hline & 273 \end{array}$$

3)

$$\begin{array}{r} 288 \\ \times 243 \\ \hline 208 & 261 \\ & 65 \\ \hline & 94 \\ & 145 \\ \hline & 165 \end{array}$$

_____ > _____ > _____ > _____

9)

$$\begin{array}{r} 135 \\ \times 120 \\ \hline 120 & 135 \\ & 323 \\ \hline & 249 \end{array}$$

4)

$$\begin{array}{r} 616 \\ \times 692 \\ \hline 499 & 483 \\ & 847 \\ \hline & 982 \\ & 430 \\ \hline & 468 \end{array}$$

_____ > _____ > _____ > _____

10)

$$\begin{array}{r} 161 \\ \times 298 \\ \hline 298 & 161 \\ & 186 \\ \hline & 301 \end{array}$$

5)

$$\begin{array}{r} 652 \\ \times 623 \\ \hline 580 & 572 \\ & 907 \\ \hline & 686 \\ & 922 \\ \hline & 791 \end{array}$$

_____ > _____ > _____ > _____

11)

$$\begin{array}{r} 159 \\ \times 71 \\ \hline 71 & 159 \\ & 228 \\ \hline & 88 \end{array}$$

12)

$$\begin{array}{r} 39 \\ \times 214 \\ \hline 214 & 39 \\ & 37 \\ \hline & 203 \end{array}$$

13)

$$\begin{array}{r} 244 \\ \times 221 \\ \hline 221 & 244 \\ & 311 \\ \hline & 321 \end{array}$$

14)

$$\begin{array}{r} 143 \\ \times 125 \\ \hline 125 & 143 \\ & 215 \\ \hline & 182 \end{array}$$

15)

$$\begin{array}{r} 219 \\ \times 321 \\ \hline 321 & 219 \\ & 106 \\ \hline & 152 \end{array}$$

For each incorrect answer,
15" is added
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taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)
$\frac{75}{48} > \frac{237}{175} > \frac{59}{50} > \frac{17}{15}$
1.563
1.354
1.180
1.133

2)
$\frac{72}{71} > \frac{296}{323} > \frac{83}{97} > \frac{99}{133}$
1.014
0.916
0.856
0.744

3)
$\frac{94}{65} > \frac{261}{208} > \frac{288}{243} > \frac{165}{145}$
1.446
1.255
1.185
1.138

4)
$\frac{982}{847} > \frac{468}{430} > \frac{483}{499} > \frac{616}{692}$
1.159
1.088
0.968
0.890

5)
$\frac{652}{623} > \frac{572}{580} > \frac{791}{922} > \frac{686}{907}$
1.047
0.986
0.858
0.756

6)	121	138.84%	289
	119	->	296
	1.017	->	0.976
		148.74%	
7)	71	51.06%	47
	205	<-	134
	0.346	<-	0.351
		52.99%	
8)	54	59.26%	86
	155	->	273
	0.348	->	0.315
		76.13%	
9)	135	139.26%	323
	120	->	249
	1.125	->	1.297
		107.50%	
10)	161	15.53%	186
	298	->	301
	0.540	->	0.618
		1.01%	
11)	159	43.40%	228
	71	->	88
	2.239	->	2.591
		23.94%	
12)	39	5.41%	37
	214	<-	203
	0.182	<-	0.182
		5.42%	
13)	244	27.46%	311
	221	->	321
	1.104	->	0.969
		45.25%	
14)	143	50.35%	215
	125	->	182
	1.144	->	1.181
		45.60%	
15)	219	106.60%	106
	321	<-	152
	0.682	<-	0.697
		111.18%	

1)

314	102	321	277
141	41	171	136
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

6)

172	_____	116
313	_____	211
<hr/>		

7)

50	_____	230
62	_____	288
<hr/>		

2)

30	176	35	186
70	325	73	313
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

8)

72	_____	257
79	_____	306
<hr/>		

9)

259	_____	165
285	_____	164
<hr/>		

3)

159	261	82	93
222	273	102	111
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

10)

323	_____	296
334	_____	276
<hr/>		

11)

23	_____	47
91	_____	208
<hr/>		

4)

983	262	940	755
921	260	780	794
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

12)

164	_____	97
329	_____	177
<hr/>		

5)

59	282	922	846
76	316	874	889
<hr/>			
_____	_____	_____	_____

_____ > _____ > _____ > _____

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
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4'00"~4'30" : Excellent	
~4'00" : Superior	

1)
$\frac{102}{41} > \frac{314}{141} > \frac{277}{136} > \frac{321}{171}$
2.488
2.227
2.037
1.877

2)
$\frac{186}{313} > \frac{176}{325} > \frac{35}{73} > \frac{30}{70}$
0.594
0.542
0.479
0.429

3)
$\frac{261}{273} > \frac{93}{111} > \frac{82}{102} > \frac{159}{222}$
0.956
0.838
0.804
0.716

4)
$\frac{940}{780} > \frac{983}{921} > \frac{262}{260} > \frac{755}{794}$
1.205
1.067
1.008
0.951

5)
$\frac{922}{874} > \frac{846}{889} > \frac{282}{316} > \frac{59}{76}$
1.055
0.952
0.892
0.776

6)	$\frac{172}{313}$	48.28%	116
	0.550	<-	211
	0.550	48.34%	
		360.00%	
7)	$\frac{50}{62}$	->	230
	0.806	->	288
	0.799	364.52%	
		256.94%	
8)	$\frac{72}{79}$	->	257
	0.911	->	306
	0.840	287.34%	
		56.97%	
9)	$\frac{259}{285}$	<-	165
	0.909	<-	164
	1.006	73.78%	
		9.12%	
10)	$\frac{323}{334}$	<-	296
	0.967	<-	276
	1.072	21.01%	
		104.35%	
11)	$\frac{23}{91}$	->	47
	0.253	->	208
	0.226	128.57%	
		69.07%	
12)	$\frac{164}{329}$	<-	97
	0.498	<-	177
	0.548	85.88%	
		30.12%	
13)	$\frac{249}{191}$	->	324
	1.304	->	224
	1.446	17.28%	
		71.70%	
14)	$\frac{159}{126}$	->	273
	1.262	->	196
	1.393	55.56%	
		0.00%	
15)	$\frac{191}{314}$	->	191
	0.608	->	336
	0.568	7.01%	

1)

60	322	235	233
42	280	196	175
<hr/>			
_____ > _____ > _____ > _____			

6)

89		182
80		157
<hr/>		

2)

186	262	254	88
195	256	304	79
<hr/>			
_____ > _____ > _____ > _____			

8)

330		231
266		197
<hr/>		

3)

336	307	242	276
324	330	206	321
<hr/>			
_____ > _____ > _____ > _____			

10)

151		298
78		151
<hr/>		

4)

740	490	950	334
463	288	711	235
<hr/>			
_____ > _____ > _____ > _____			

11)

166		174
201		202
<hr/>		

5)

638	428	237	406
298	169	119	180
<hr/>			
_____ > _____ > _____ > _____			

13)

122		87
310		242
<hr/>		

14)

143		264
97		183
<hr/>		

15)

202		135
86		64
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{60}{42} > \frac{233}{175} > \frac{235}{196} > \frac{322}{280}$
1.429	1.331
1.199	1.150

2)	$\frac{88}{79} > \frac{262}{256} > \frac{186}{195} > \frac{254}{304}$
1.114	1.023
0.954	0.836

3)	$\frac{242}{206} > \frac{336}{324} > \frac{307}{330} > \frac{276}{321}$
1.175	1.037
0.930	0.860

4)	$\frac{490}{288} > \frac{740}{463} > \frac{334}{235} > \frac{950}{711}$
1.701	1.598
1.421	1.336

5)	$\frac{428}{169} > \frac{406}{180} > \frac{638}{298} > \frac{237}{119}$
2.533	2.256
2.141	1.992

6)	$\frac{89}{80}$	104.49% -> ->	182 157 1.159
	1.113	96.25%	
7)	$\frac{254}{244}$	104.84% <- <-	124 116 1.069
	1.041	110.34%	
8)	$\frac{330}{266}$	42.86% <- <-	231 197 1.173
	1.241	35.03%	
9)	$\frac{291}{286}$	38.57% <- <-	210 221 0.950
	1.017	29.41%	
10)	$\frac{151}{78}$	97.35% -> ->	298 151 1.974
	1.936	93.59%	
11)	$\frac{166}{201}$	4.82% -> ->	174 202 0.861
	0.826	0.50%	
12)	$\frac{146}{237}$	54.11% -> ->	225 322 0.699
	0.616	35.86%	
13)	$\frac{122}{310}$	40.23% <- <-	87 242 0.360
	0.394	28.10%	
14)	$\frac{143}{97}$	84.62% -> ->	264 183 1.443
	1.474	88.66%	
15)	$\frac{202}{86}$	49.63% <- <-	135 64 2.109
	2.349	34.38%	

1)

169	160	130	179
224	195	183	205
<hr/>			
_____ > _____ > _____ > _____			

6)

221		326
191		299
<hr/>		

2)

127	119	142	14
266	226	331	25
<hr/>			
_____ > _____ > _____ > _____			

8)

217		295
146		218
<hr/>		

3)

193	155	73	221
272	295	122	332
<hr/>			
_____ > _____ > _____ > _____			

10)

299		191
250		166
<hr/>		

4)

901	247	908	892
572	143	660	679
<hr/>			
_____ > _____ > _____ > _____			

11)

267		95
230		87
<hr/>		

5)

433	750	353	702
696	967	535	967
<hr/>			
_____ > _____ > _____ > _____			

12)

231		173
188		159
<hr/>		

13)

263		233
268		239
<hr/>		

14)

195		285
113		168
<hr/>		

15)

289		126
330		163
<hr/>		

For each incorrect answer,
15" is added
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5'30"~6'00" : Acceptable	
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4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)						
179	>	160	>	169	>	130
205		195		224		183
0.873		0.821		0.754		0.710

2)						
14	>	119	>	127	>	142
25		226		266		331
0.560		0.527		0.477		0.429

3)						
193	>	221	>	73	>	155
272		332		122		295
0.710		0.666		0.598		0.525

4)						
247	>	901	>	908	>	892
143		572		660		679
1.727		1.575		1.376		1.314

5)						
750	>	702	>	353	>	433
967		967		535		696
0.776		0.726		0.660		0.622

6)	221	47.51%	326
	191	->	299
	1.157	56.54%	1.090
7)	322	22.90%	262
	202	<-	167
	1.594	20.96%	1.569
8)	217	35.94%	295
	146	->	218
	1.486	49.32%	1.353
9)	50	560.00%	330
	30	->	225
	1.667	650.00%	1.467
10)	299	56.54%	191
	250	<-	166
	1.196	50.60%	1.151
11)	267	181.05%	95
	230	<-	87
	1.161	164.37%	1.092
12)	231	33.53%	173
	188	<-	159
	1.229	18.24%	1.088
13)	263	12.88%	233
	268	<-	239
	0.981	12.13%	0.975
14)	195	46.15%	285
	113	->	168
	1.726	48.67%	1.696
15)	289	129.37%	126
	330	<-	163
	0.876	102.45%	0.773

1)

236	276	155	215
313	280	180	264
<hr/>			
_____ > _____ > _____ > _____			

6)

290		304
146		165
<hr/>		

2)

222	134	69	143
219	146	72	166
<hr/>			
_____ > _____ > _____ > _____			

8)

216		327
184		269
<hr/>		

3)

101	132	138	211
95	109	151	216
<hr/>			
_____ > _____ > _____ > _____			

10)

303		292
198		183
<hr/>		

4)

289	503	131	377
313	570	118	366
<hr/>			
_____ > _____ > _____ > _____			

12)

275		101
245		79
<hr/>		

5)

577	745	955	572
418	648	911	465
<hr/>			
_____ > _____ > _____ > _____			

13)

12		12
58		55
<hr/>		

14)

159		132
164		124
<hr/>		

15)

219		252
207		264
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{276}{280} > \frac{155}{180} > \frac{215}{264} > \frac{236}{313}$
276	155
280	180
0.986	0.861
0.814	0.754

2)	$\frac{222}{219} > \frac{69}{72} > \frac{134}{146} > \frac{143}{166}$
222	69
219	72
1.014	0.958
0.918	0.861

3)	$\frac{132}{109} > \frac{101}{95} > \frac{211}{216} > \frac{138}{151}$
132	101
109	95
1.211	1.063
0.977	0.914

4)	$\frac{131}{118} > \frac{377}{366} > \frac{289}{313} > \frac{503}{570}$
131	377
118	366
1.110	1.030
0.923	0.882

5)	$\frac{577}{418} > \frac{572}{465} > \frac{745}{648} > \frac{955}{911}$
577	572
418	465
1.380	1.230
1.150	1.048

6)	$\frac{290}{146}$	4.83% -> 304
	290	->
	146	13.01%
	1.986	1.842
7)	$\frac{30}{43}$	240.00% -> 102
	30	->
	43	239.53%
	0.698	0.699
8)	$\frac{216}{184}$	51.39% -> 327
	216	->
	184	46.20%
	1.174	1.216
9)	$\frac{211}{206}$	177.63% <- 76
	211	<-
	206	160.76%
	1.024	0.962
10)	$\frac{303}{198}$	3.77% <- 292
	303	<-
	198	8.20%
	1.530	1.596
11)	$\frac{316}{196}$	61.22% <- 196
	316	<-
	196	63.33%
	1.612	1.633
12)	$\frac{275}{245}$	172.28% <- 101
	275	<-
	245	210.13%
	1.122	1.278
13)	$\frac{12}{58}$	0.00% -> 12
	12	->
	58	5.45%
	0.207	0.218
14)	$\frac{159}{164}$	20.45% <- 55
	159	<-
	164	32.26%
	0.970	1.065
15)	$\frac{219}{207}$	15.07% -> 252
	219	->
	207	27.54%
	1.058	0.955

1)

298	186	125	272
234	197	106	256
<hr/>			
_____ > _____ > _____ > _____			

6)

294		316
138		164
<hr/>		

2)

83	132	246	155
121	202	331	259
<hr/>			
_____ > _____ > _____ > _____			

8)

192		252
150		198
<hr/>		

3)

228	330	71	292
121	184	43	196
<hr/>			
_____ > _____ > _____ > _____			

10)

216		196
303		238
<hr/>		

4)

958	751	878	612
588	568	608	482
<hr/>			
_____ > _____ > _____ > _____			

11)

26		43
183		312
<hr/>		

5)

358	627	766	725
272	690	675	689
<hr/>			
_____ > _____ > _____ > _____			

12)

138		329
149		324
<hr/>		

For each incorrect answer,
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6'00"~ : Need Work

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~4'00" : Superior

1)						
298	>	125	>	272	>	186
234		106		256		197
1.274		1.179		1.063		0.944

2)						
246	>	83	>	132	>	155
331		121		202		259
0.743		0.686		0.653		0.598

3)						
228	>	330	>	71	>	292
121		184		43		196
1.884		1.793		1.651		1.490

4)						
958	>	878	>	751	>	612
588		608		568		482
1.629		1.444		1.322		1.270

5)						
358	>	766	>	725	>	627
272		675		689		690
1.316		1.135		1.052		0.909

6)	294	7.48%	316
	138	->	164
	2.130	18.84%	1.927
7)	254	12.60%	286
	259	->	259
	0.981	0.00%	1.104
8)	192	31.25%	252
	150	->	198
	1.280	32.00%	1.273
9)	180	22.22%	220
	90	->	98
	2.000	8.89%	2.245
10)	216	10.20%	196
	303	<-	238
	0.713	27.31%	0.824
11)	26	65.38%	43
	183	->	312
	0.142	70.49%	0.138
12)	138	138.41%	329
	149	->	324
	0.926	117.45%	1.015
13)	325	3.83%	313
	315	<-	262
	1.032	20.23%	1.195
14)	212	29.27%	164
	328	<-	284
	0.646	15.49%	0.577
15)	106	152.38%	42
	273	<-	102
	0.388	167.65%	0.412

1)

269	153	234	234
311	201	253	325
<hr/>			
_____ > _____ > _____ > _____			

6)

126	_____	47
324	_____	108
<hr/>		

2)

269	245	227	322
240	286	194	328
<hr/>			
_____ > _____ > _____ > _____			

8)

166	_____	196
253	_____	269
<hr/>		

3)

185	332	250	47
185	263	261	41
<hr/>			
_____ > _____ > _____ > _____			

10)

204	_____	170
132	_____	103
<hr/>		

4)

202	306	616	325
393	538	967	463
<hr/>			
_____ > _____ > _____ > _____			

11)

288	_____	194
307	_____	214
<hr/>		

5)

956	356	874	881
987	336	734	699
<hr/>			
_____ > _____ > _____ > _____			

14)

50	_____	105
82	_____	189
<hr/>		

15)

232	_____	101
323	_____	128
<hr/>		

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5'00"~5'30" : Average

4'30"~5'00" : good

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~4'00" : Superior

1)	$\frac{234}{253} > \frac{269}{311} > \frac{153}{201} > \frac{234}{325}$
	0.925 0.865 0.761 0.720

2)	$\frac{227}{194} > \frac{269}{240} > \frac{322}{328} > \frac{245}{286}$
	1.170 1.121 0.982 0.857

3)	$\frac{332}{263} > \frac{47}{41} > \frac{185}{185} > \frac{250}{261}$
	1.262 1.146 1.000 0.958

4)	$\frac{325}{463} > \frac{616}{967} > \frac{306}{538} > \frac{202}{393}$
	0.702 0.637 0.569 0.514

5)	$\frac{881}{699} > \frac{874}{734} > \frac{356}{336} > \frac{956}{987}$
	1.260 1.191 1.060 0.969

6)	$\frac{126}{324} < \frac{0.389}{0.435}$
	168.09% <- 47 108
7)	$\frac{330}{276} < \frac{1.196}{1.376}$
	200.00% <- 172 125
8)	$\frac{166}{253} > \frac{0.656}{0.729}$
	91.86% <- 196 269
9)	$\frac{281}{309} < \frac{0.909}{0.912}$
	120.80% >- 238 261
10)	$\frac{204}{132} < \frac{1.545}{1.650}$
	18.07% <- 170 103
11)	$\frac{288}{307} < \frac{0.938}{0.907}$
	20.00% <- 194 214
12)	$\frac{250}{186} > \frac{1.344}{1.304}$
	28.16% >- 266 204
13)	$\frac{130}{233} > \frac{0.558}{0.584}$
	48.45% >- 146 250
14)	$\frac{50}{82} > \frac{0.610}{0.556}$
	43.46% >- 105 189
15)	$\frac{232}{323} < \frac{0.718}{0.789}$
	6.40% >- 101 128

1)

$\frac{26}{20}$	$\frac{335}{311}$	$\frac{183}{151}$	$\frac{222}{230}$
-----------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

2)

$\frac{333}{283}$	$\frac{167}{124}$	$\frac{316}{197}$	$\frac{246}{166}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

3)

$\frac{272}{252}$	$\frac{273}{311}$	$\frac{286}{240}$	$\frac{303}{316}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

4)

$\frac{915}{577}$	$\frac{91}{48}$	$\frac{905}{548}$	$\frac{607}{430}$
-------------------	-----------------	-------------------	-------------------

_____ > _____ > _____ > _____

5)

$\frac{478}{635}$	$\frac{708}{772}$	$\frac{909}{936}$	$\frac{218}{256}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

6)

$\frac{143}{330}$	<input type="text"/>	$\frac{113}{241}$
-------------------	----------------------	-------------------

7)

$\frac{108}{335}$	<input type="text"/>	$\frac{62}{168}$
-------------------	----------------------	------------------

8)

$\frac{241}{297}$	<input type="text"/>	$\frac{179}{229}$
-------------------	----------------------	-------------------

9)

$\frac{280}{296}$	<input type="text"/>	$\frac{80}{81}$
-------------------	----------------------	-----------------

10)

$\frac{101}{87}$	<input type="text"/>	$\frac{196}{183}$
------------------	----------------------	-------------------

11)

$\frac{313}{293}$	<input type="text"/>	$\frac{134}{118}$
-------------------	----------------------	-------------------

12)

$\frac{289}{81}$	<input type="text"/>	$\frac{291}{81}$
------------------	----------------------	------------------

13)

$\frac{315}{142}$	<input type="text"/>	$\frac{108}{49}$
-------------------	----------------------	------------------

14)

$\frac{42}{120}$	<input type="text"/>	$\frac{111}{308}$
------------------	----------------------	-------------------

15)

$\frac{157}{293}$	<input type="text"/>	$\frac{209}{336}$
-------------------	----------------------	-------------------

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5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{26}{20} > \frac{183}{151} > \frac{335}{311} > \frac{222}{230}$
1.300	1.212

2)	$\frac{316}{197} > \frac{246}{166} > \frac{167}{124} > \frac{333}{283}$
1.604	1.482

3)	$\frac{286}{240} > \frac{272}{252} > \frac{303}{316} > \frac{273}{311}$
1.192	1.079

4)	$\frac{91}{48} > \frac{905}{548} > \frac{915}{577} > \frac{607}{430}$
1.896	1.651

5)	$\frac{909}{936} > \frac{708}{772} > \frac{218}{256} > \frac{478}{635}$
0.971	0.917

6)	$\frac{143}{330}$	26.55%	113
	0.433	<-	241
		36.93%	0.469
7)	$\frac{108}{335}$	74.19%	62
	0.322	<-	168
		99.40%	0.369
8)	$\frac{241}{297}$	34.64%	179
	0.811	<-	229
		29.69%	0.782
9)	$\frac{280}{296}$	250.00%	80
	0.946	<-	81
		265.43%	0.988
10)	$\frac{101}{87}$	94.06%	196
	1.161	->	183
		110.34%	1.071
11)	$\frac{313}{293}$	133.58%	134
	1.068	<-	118
		148.31%	1.136
12)	$\frac{289}{81}$	0.69%	291
	3.568	->	81
		0.00%	3.593
13)	$\frac{315}{142}$	191.67%	108
	2.218	<-	49
		189.80%	2.204
14)	$\frac{42}{120}$	164.29%	111
	0.350	->	308
		156.67%	0.360
15)	$\frac{157}{293}$	33.12%	209
	0.536	->	336
		14.68%	0.622

1)

182	189	222	149
213	205	285	212
_____ > _____ > _____ > _____			

6)

212		64
284		79

2)

73	192	144	119
168	338	311	243
_____ > _____ > _____ > _____			

8)

189		189
269		297

3)

331	248	120	330
196	126	68	207
_____ > _____ > _____ > _____			

10)

306		226
171		125

4)

633	268	253	281
971	386	425	530
_____ > _____ > _____ > _____			

11)

306		195
301		218

5)

609	734	653	444
929	941	953	740
_____ > _____ > _____ > _____			

13)

183		234
35		51

14)

149		105
134		91

15)

160		149
180		167

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4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)	$\frac{189}{205} > \frac{182}{213} > \frac{222}{285} > \frac{149}{212}$	0.922	0.854	0.779	0.703
----	---	-------	-------	-------	-------

2)	$\frac{192}{338} > \frac{119}{243} > \frac{144}{311} > \frac{73}{168}$	0.568	0.490	0.463	0.435
----	--	-------	-------	-------	-------

3)	$\frac{248}{126} > \frac{120}{68} > \frac{331}{196} > \frac{330}{207}$	1.968	1.765	1.689	1.594
----	--	-------	-------	-------	-------

4)	$\frac{268}{386} > \frac{633}{971} > \frac{253}{425} > \frac{281}{530}$	0.694	0.652	0.595	0.530
----	---	-------	-------	-------	-------

5)	$\frac{734}{941} > \frac{653}{953} > \frac{609}{929} > \frac{444}{740}$	0.780	0.685	0.656	0.600
----	---	-------	-------	-------	-------

6)	$\frac{212}{284}$	231.25%	<-	64	79
	0.746	259.49%	<-	0.810	
7)	$\frac{203}{172}$	9.85%	->	223	211
	1.180	22.67%	->	1.057	
8)	$\frac{189}{269}$	0.00%	->	189	297
	0.703	10.41%	->	0.636	
9)	$\frac{193}{160}$	14.51%	->	221	162
	1.206	1.25%	->	1.364	
10)	$\frac{306}{171}$	35.40%	<-	226	125
	1.789	36.80%	<-	1.808	
11)	$\frac{306}{301}$	56.92%	<-	195	218
	1.017	38.07%	<-	0.894	
12)	$\frac{86}{90}$	126.74%	->	195	201
	0.956	123.33%	->	0.970	
13)	$\frac{183}{35}$	27.87%	->	234	51
	5.229	45.71%	->	4.588	
14)	$\frac{149}{134}$	41.90%	<-	105	91
	1.112	47.25%	<-	1.154	
15)	$\frac{160}{180}$	7.38%	<-	149	167
	0.889	7.78%	<-	0.892	

1)

202	136	182	205
310	187	232	231
<hr/>			
_____ > _____ > _____ > _____			

6)

293	<input type="text"/>	171
311	<input type="text"/>	190
<hr/>		

2)

210	317	113	256
129	232	78	148
<hr/>			
_____ > _____ > _____ > _____			

8)

308	<input type="text"/>	280
186	<input type="text"/>	156
<hr/>		

3)

190	311	283	203
160	324	219	185
<hr/>			
_____ > _____ > _____ > _____			

9)

156	<input type="text"/>	174
294	<input type="text"/>	328
<hr/>		

4)

881	593	798	647
750	675	743	667
<hr/>			
_____ > _____ > _____ > _____			

10)

128	<input type="text"/>	163
156	<input type="text"/>	215
<hr/>		

5)

565	628	358	764
972	943	476	883
<hr/>			
_____ > _____ > _____ > _____			

11)

212	<input type="text"/>	235
101	<input type="text"/>	108
<hr/>		

12)

195	<input type="text"/>	152
265	<input type="text"/>	211
<hr/>		

13)

105	<input type="text"/>	107
104	<input type="text"/>	109
<hr/>		

14)

30	<input type="text"/>	93
23	<input type="text"/>	81
<hr/>		

15)

231	<input type="text"/>	119
328	<input type="text"/>	183
<hr/>		

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1)	$\frac{205}{231} > \frac{182}{232} > \frac{136}{187} > \frac{202}{310}$
	0.887 0.784 0.727 0.652

2)	$\frac{256}{148} > \frac{210}{129} > \frac{113}{78} > \frac{317}{232}$
	1.730 1.628 1.449 1.366

3)	$\frac{283}{219} > \frac{190}{160} > \frac{203}{185} > \frac{311}{324}$
	1.292 1.188 1.097 0.960

4)	$\frac{881}{750} > \frac{798}{743} > \frac{647}{667} > \frac{593}{675}$
	1.175 1.074 0.970 0.879

5)	$\frac{764}{883} > \frac{358}{476} > \frac{628}{943} > \frac{565}{972}$
	0.865 0.752 0.666 0.581

6)	$\frac{293}{311} < \frac{171}{190}$
	0.942 0.900
7)	$\frac{218}{199} < \frac{180}{146}$
	1.095 1.233
8)	$\frac{308}{186} < \frac{280}{156}$
	1.656 1.795
9)	$\frac{156}{294} > \frac{174}{328}$
	0.531 0.530
10)	$\frac{128}{156} > \frac{163}{215}$
	0.821 0.758
11)	$\frac{212}{101} > \frac{235}{108}$
	2.099 2.176
12)	$\frac{195}{265} > \frac{152}{211}$
	0.736 0.720
13)	$\frac{105}{104} > \frac{107}{109}$
	1.010 0.982
14)	$\frac{30}{23} > \frac{93}{81}$
	1.304 1.148
15)	$\frac{231}{328} > \frac{119}{183}$
	0.704 0.650

1)

$\frac{255}{236}$	$\frac{270}{219}$	$\frac{277}{200}$	$\frac{37}{25}$
-------------------	-------------------	-------------------	-----------------

_____ > _____ > _____ > _____

6)

$\frac{300}{158}$	_____	$\frac{105}{49}$
-------------------	-------	------------------

2)

$\frac{220}{224}$	$\frac{329}{311}$	$\frac{203}{160}$	$\frac{282}{246}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

8)

$\frac{103}{128}$	_____	$\frac{141}{189}$
-------------------	-------	-------------------

3)

$\frac{224}{197}$	$\frac{124}{119}$	$\frac{199}{240}$	$\frac{173}{180}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

9)

$\frac{163}{190}$	_____	$\frac{151}{153}$
-------------------	-------	-------------------

4)

$\frac{590}{590}$	$\frac{713}{901}$	$\frac{840}{936}$	$\frac{597}{712}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

10)

$\frac{185}{149}$	_____	$\frac{271}{208}$
-------------------	-------	-------------------

5)

$\frac{658}{817}$	$\frac{226}{297}$	$\frac{425}{438}$	$\frac{884}{999}$
-------------------	-------------------	-------------------	-------------------

_____ > _____ > _____ > _____

11)

$\frac{154}{51}$	_____	$\frac{232}{83}$
------------------	-------	------------------

12)

$\frac{85}{240}$	_____	$\frac{52}{127}$
------------------	-------	------------------

13)

$\frac{41}{150}$	_____	$\frac{73}{231}$
------------------	-------	------------------

14)

$\frac{100}{48}$	_____	$\frac{321}{162}$
------------------	-------	-------------------

15)

$\frac{279}{89}$	_____	$\frac{296}{107}$
------------------	-------	-------------------

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1)	$\frac{37}{25} > \frac{277}{200} > \frac{270}{219} > \frac{255}{236}$
	1.480 1.385 1.233 1.081

2)	$\frac{203}{160} > \frac{282}{246} > \frac{329}{311} > \frac{220}{224}$
	1.269 1.146 1.058 0.982

3)	$\frac{224}{197} > \frac{124}{119} > \frac{173}{180} > \frac{199}{240}$
	1.137 1.042 0.961 0.829

4)	$\frac{590}{590} > \frac{840}{936} > \frac{597}{712} > \frac{713}{901}$
	1.000 0.897 0.838 0.791

5)	$\frac{425}{438} > \frac{884}{999} > \frac{658}{817} > \frac{226}{297}$
	0.970 0.885 0.805 0.761

6)	$\frac{300}{158}$	185.71% <- 1.899 222.45%	105 49 2.143
7)	$\frac{107}{162}$	117.76% -> 0.660 98.15%	233 321 0.726
8)	$\frac{103}{128}$	36.89% -> 0.805 47.66%	141 189 0.746
9)	$\frac{163}{190}$	7.95% <- 0.858 24.18%	151 153 0.987
10)	$\frac{185}{149}$	46.49% -> 1.242 39.60%	271 208 1.303
11)	$\frac{154}{51}$	50.65% -> 3.020 62.75%	232 83 2.795
12)	$\frac{85}{240}$	63.46% <- 0.354 88.98%	52 127 0.409
13)	$\frac{41}{150}$	78.05% -> 0.273 54.00%	73 231 0.316
14)	$\frac{100}{48}$	221.00% -> 2.083 237.50%	321 162 1.981
15)	$\frac{279}{89}$	6.09% -> 3.135 20.22%	296 107 2.766

2:51.

1)

$$\begin{array}{r} 267 \\ 152 \\ \hline 125 \\ 125 \\ \hline 0 \end{array} \quad \begin{array}{r} 340 \\ 226 \\ \hline 114 \\ 114 \\ \hline 0 \end{array} \quad \begin{array}{r} 278 \\ 138 \\ \hline 140 \\ 140 \\ \hline 0 \end{array} \quad \begin{array}{r} 71 \\ 45 \\ \hline 26 \\ 26 \\ \hline 0 \end{array}$$

$$\begin{array}{c} > \\ 2 \\ \hline > \end{array} > \begin{array}{c} 4 \\ > \\ 1 \\ \hline 2 \end{array} > \begin{array}{c} < \\ 1 \\ \hline > \end{array}$$

2)

$$\begin{array}{r} 243 \\ 105 \\ \hline 138 \\ 105 \\ \hline 33 \\ 33 \\ \hline 0 \end{array} \quad \begin{array}{r} 338 \\ 160 \\ \hline 178 \\ 160 \\ \hline 18 \\ 18 \\ \hline 0 \end{array} \quad \begin{array}{r} 188 \\ 103 \\ \hline 85 \\ 103 \\ \hline 18 \\ 18 \\ \hline 0 \end{array} \quad \begin{array}{r} 253 \\ 97 \\ \hline 156 \\ 97 \\ \hline 59 \\ 59 \\ \hline 0 \end{array}$$

$$\begin{array}{c} 2 \\ > \\ 3 \\ \hline > \end{array} > \begin{array}{c} 4 \\ > \\ 1 \\ \hline 1 \end{array}$$

3)

$$\begin{array}{r} 187 \\ 259 \\ \hline 71 \\ 71 \\ \hline 0 \end{array} \quad \begin{array}{r} 252 \\ 290 \\ \hline 38 \\ 290 \\ \hline 10 \\ 10 \\ \hline 0 \end{array} \quad \begin{array}{r} 184 \\ 289 \\ \hline 105 \\ 289 \\ \hline 84 \\ 84 \\ \hline 0 \end{array} \quad \begin{array}{r} 176 \\ 221 \\ \hline 55 \\ 221 \\ \hline 121 \\ 121 \\ \hline 0 \end{array}$$

$$\begin{array}{c} 3 \\ > \\ 1 \\ \hline > \end{array} > \begin{array}{c} 4 \\ > \\ 2 \\ \hline 2 \end{array}$$

4)

$$\begin{array}{r} 991 \\ 592 \\ \hline 400 \\ 400 \\ \hline 0 \end{array} \quad \begin{array}{r} 561 \\ 313 \\ \hline 248 \\ 248 \\ \hline 0 \end{array} \quad \begin{array}{r} 284 \\ 148 \\ \hline 136 \\ 148 \\ \hline 0 \end{array} \quad \begin{array}{r} 920 \\ 427 \\ \hline 493 \\ 427 \\ \hline 66 \\ 66 \\ \hline 0 \end{array}$$

$$\begin{array}{c} > \\ 3 \\ \hline > \end{array} > \begin{array}{c} 4 \\ > \\ 2 \\ \hline 1 \end{array}$$

5)

$$\begin{array}{r} 314 \\ 461 \\ \hline 147 \\ 147 \\ \hline 0 \end{array} \quad \begin{array}{r} 500 \\ 866 \\ \hline 366 \\ 366 \\ \hline 0 \end{array} \quad \begin{array}{r} 484 \\ 901 \\ \hline 417 \\ 417 \\ \hline 0 \end{array} \quad \begin{array}{r} 542 \\ 864 \\ \hline 322 \\ 322 \\ \hline 0 \end{array}$$

$$\begin{array}{c} 1 \\ > \\ 2 \\ \hline > \end{array} > \begin{array}{c} 4 \\ > \\ 2 \\ \hline 2 \end{array}$$

6)

$$\begin{array}{r} 228 \\ 303 \\ \hline 75 \\ 75 \\ \hline 0 \end{array} \quad \begin{array}{c} < \\ 133 \\ \hline 153 \end{array}$$

7)

$$\begin{array}{r} 246 \\ 334 \\ \hline 92 \\ 92 \\ \hline 0 \end{array} \quad \begin{array}{c} > \\ 36 \\ \hline 49 \end{array}$$

8)

$$\begin{array}{r} 324 \\ 146 \\ \hline 178 \\ 178 \\ \hline 0 \end{array} \quad \begin{array}{c} < \\ 213 \\ \hline 89 \end{array}$$

9)

$$\begin{array}{r} 81 \\ 60 \\ \hline 21 \\ 21 \\ \hline 0 \end{array} \quad \begin{array}{c} < \\ 331 \\ \hline 240 \end{array}$$

10)

$$\begin{array}{r} 218 \\ 211 \\ \hline 7 \\ 7 \\ \hline 0 \end{array} \quad \begin{array}{c} < \\ 115 \\ \hline 97 \end{array}$$

11)

$$\begin{array}{r} 305 \\ 187 \\ \hline 118 \\ 118 \\ \hline 0 \end{array} \quad \begin{array}{c} > \\ 212 \\ \hline 137 \end{array}$$

12)

$$\begin{array}{r} 322 \\ 335 \\ \hline 97 \\ 97 \\ \hline 0 \end{array} \quad \begin{array}{c} < \\ 96 \\ \hline 89 \end{array}$$

13)

$$\begin{array}{r} 207 \\ 116 \\ \hline 91 \\ 91 \\ \hline 0 \end{array} \quad \begin{array}{c} > \\ 273 \\ \hline 162 \end{array}$$

14)

$$\begin{array}{r} 161 \\ 104 \\ \hline 57 \\ 57 \\ \hline 0 \end{array} \quad \begin{array}{c} < \\ 265 \\ \hline 154 \end{array}$$

15)

$$\begin{array}{r} 332 \\ 133 \\ \hline 200 \\ 200 \\ \hline 0 \end{array} \quad \begin{array}{c} > \\ 49 \\ \hline 20 \end{array}$$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{278}{138} > \frac{267}{152} > \frac{71}{45} > \frac{340}{226}$
	2.014 1.757 1.578 1.504

2)	$\frac{253}{97} > \frac{243}{105} > \frac{338}{160} > \frac{188}{103}$
	2.608 2.314 2.113 1.825

3)	$\frac{252}{290} > \frac{176}{221} > \frac{187}{259} > \frac{184}{289}$
	0.869 0.796 0.722 0.637

4)	$\frac{920}{427} > \frac{284}{148} > \frac{561}{313} > \frac{991}{592}$
	2.155 1.919 1.792 1.674

5)	$\frac{314}{461} > \frac{542}{864} > \frac{500}{866} > \frac{484}{901}$
	0.681 0.627 0.577 0.537

6)	$\frac{228}{303}$	71.43% <- 133
	0.752	98.04% 583.33% 153
7)	$\frac{246}{334}$	<- <- 36
	0.737	581.63% 52.11% 49
8)	$\frac{324}{146}$	<- <- 213
	2.219	64.04% 308.64% 89
9)	$\frac{81}{60}$	-> -> 331
	1.350	300.00% 89.57% 240
10)	$\frac{218}{211}$	<- <- 115
	1.033	117.53% 43.87% 97
11)	$\frac{305}{187}$	<- <- 212
	1.631	36.50% 235.42% 137
12)	$\frac{322}{335}$	<- <- 96
	0.961	276.40% 31.88% 89
13)	$\frac{207}{116}$	-> -> 273
	1.784	39.66% 64.60% 162
14)	$\frac{161}{104}$	-> -> 265
	1.548	48.08% 577.55% 154
15)	$\frac{332}{133}$	<- <- 49
	2.496	565.00% 20 2.450

3 45

1)

$$\begin{array}{r} 78 \\ 173 \\ \hline 166 \\ 328 \\ \hline 146 \\ 256 \\ \hline 132 \\ 202 \\ \hline \end{array}$$

4 > 3 > 2 > 1

2)

$$\begin{array}{r} 24 \\ 14 \\ \hline 270 \\ 136 \\ \hline 30 \\ 20 \\ \hline 264 \\ 201 \\ \hline \end{array}$$

2 > 1 > 3 > 4

3)

$$\begin{array}{r} 233 \\ 204 \\ \hline 77 \\ 82 \\ \hline 257 \\ 305 \\ \hline 341 \\ 340 \\ \hline \end{array}$$

1 > 2 > 4 > 3

4)

$$\begin{array}{r} 999 \\ 714 \\ \hline 994 \\ 823 \\ \hline 499 \\ 458 \\ \hline 342 \\ 357 \\ \hline \end{array}$$

1 > 2 > 3 > 4

5)

$$\begin{array}{r} 650 \\ 757 \\ \hline 905 \\ 969 \\ \hline 427 \\ 568 \\ \hline 331 \\ 420 \\ \hline \end{array}$$

2 > 1 > 3 > 4

6)

$$\begin{array}{r} 273 \\ 328 \\ \hline 240 \\ 285 \\ \hline \end{array}$$

< 240 8/P.

7)

$$\begin{array}{r} 164 \\ 113 \\ \hline 262 \\ 171 \\ \hline \end{array}$$

< 262 171

8)

$$\begin{array}{r} 311 \\ 171 \\ \hline 176 \\ 84 \\ \hline \end{array}$$

< 176 84

9)

$$\begin{array}{r} 85 \\ 14 \\ \hline 77 \\ 12 \\ \hline \end{array}$$

< 77 12

10)

$$\begin{array}{r} 331 \\ 148 \\ \hline 224 \\ 89 \\ \hline \end{array}$$

< 224 89

11)

$$\begin{array}{r} 306 \\ 319 \\ \hline 247 \\ 241 \\ \hline \end{array}$$

< 247 241

12)

$$\begin{array}{r} 51 \\ 107 \\ \hline 68 \\ 148 \\ \hline \end{array}$$

> 68 148

13)

$$\begin{array}{r} 282 \\ 153 \\ \hline 137 \\ 71 \\ \hline \end{array}$$

< 137 71

14)

$$\begin{array}{r} 304 \\ 339 \\ \hline 232 \\ 240 \\ \hline \end{array}$$

< 232 240

15)

$$\begin{array}{r} 128 \\ 82 \\ \hline 281 \\ 176 \\ \hline \end{array}$$

< 281 176

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

3: ~

1)

$$\frac{132}{202} > \frac{146}{256} > \frac{166}{328} > \frac{78}{173}$$

0.653

0.570

0.506

0.451

2)

$$\frac{270}{136} > \frac{24}{14} > \frac{30}{20} > \frac{264}{201}$$

1.985

1.714

1.500

1.313

3)

$$\frac{233}{204} > \frac{341}{340} > \frac{77}{82} > \frac{257}{305}$$

1.142

1.003

0.939

0.843

4)

$$\frac{999}{714} > \frac{994}{823} > \frac{499}{458} > \frac{342}{357}$$

1.399

1.208

1.090

0.958

5)

$$\frac{905}{969} > \frac{650}{757} > \frac{331}{420} > \frac{427}{568}$$

0.934

0.859

0.788

0.752

6)

$\frac{273}{328}$

0.832

13.75%

<-

240

285

0.842

7)

$\frac{164}{113}$

1.451

59.76%

->

262

171

1.532

8)

$\frac{311}{171}$

1.819

76.70%

<-

176

84

2.095

9)

$\frac{85}{14}$

6.071

10.39%

<-

77

12

6.417

10)

$\frac{331}{148}$

2.236

47.77%

<-

224

89

2.517

11)

$\frac{306}{319}$

0.959

23.89%

<-

247

241

1.025

12)

$\frac{51}{107}$

0.477

33.33%

->

68

148

0.459

13)

$\frac{282}{153}$

1.843

105.84%

<-

137

71

1.930

14)

$\frac{304}{339}$

0.897

31.03%

<-

232

240

0.967

15)

$\frac{128}{82}$

1.561

119.53%

->

281

176

1.597

1)

203	315	307	255
209	<u>272</u>	<u>300</u>	<u>233</u>
4	1	3	2
_____ > _____ > _____ > _____			

6)

114	<	138
251		263
_____ < _____ < _____		

2)

301	303	212	193
287	<u>306</u>	<u>230</u>	<u>234</u>
1	2	3	4
_____ > _____ > _____ > _____			

8)

161	>	71
220		109
_____ > _____ > _____		

3)

77	48	103	218
27	12	29	<u>66</u>
4	1	2	3
_____ > _____ > _____ > _____			

10)

87	<	231
54		140
_____ < _____ < _____		

~~4)~~

314	739	867	912
216	402	<u>554</u>	<u>529</u>
4	1	3	2
_____ > _____ > _____ > _____			

11)

239	<	288
178		185
_____ < _____ < _____		

~~5)~~

364	570	704	771
292	476	615	576
4	3	4	1
_____ > _____ > _____ > _____			

12)

290	>	140
167		83
_____ > _____ > _____		

~~6)~~

364	570	704	771
292	476	615	576
2	3	4	1
_____ > _____ > _____ > _____			

13)

177	<	245
166		213
_____ < _____ < _____		

~~7)~~

147	>	125
274		216
_____ > _____ > _____		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{315}{272} > \frac{255}{233} > \frac{307}{300} > \frac{203}{209}$
	1.158 1.094 1.023 0.971

2)	$\frac{301}{287} > \frac{303}{306} > \frac{212}{230} > \frac{193}{234}$
	1.049 0.990 0.922 0.825

3)	$\frac{48}{12} > \frac{103}{29} > \frac{218}{66} > \frac{77}{27}$
	4.000 3.552 3.303 2.852

4)	$\frac{739}{402} > \frac{912}{529} > \frac{867}{554} > \frac{314}{216}$
	1.838 1.724 1.565 1.454

5)	$\frac{771}{576} > \frac{364}{292} > \frac{570}{476} > \frac{704}{615}$
	1.339 1.247 1.197 1.145

6)	$\frac{114}{251}$	21.05% -> ->	138 263 0.525
	0.454	4.78%	
7)	$\frac{180}{301}$	13.92% <- <-	158 276 0.572
	0.598	9.06%	
8)	$\frac{161}{220}$	126.76% <- <-	71 109 0.651
	0.732	101.83%	
9)	$\frac{272}{236}$	11.40% -> ->	303 242 1.252
	1.153	2.54%	
10)	$\frac{87}{54}$	165.52% -> ->	231 140 1.650
	1.611	159.26%	
11)	$\frac{239}{178}$	20.50% -> ->	288 185 1.557
	1.343	3.93%	
12)	$\frac{290}{167}$	107.14% <- <-	140 83 1.687
	1.737	101.20%	
13)	$\frac{177}{166}$	38.42% -> ->	245 213 1.150
	1.066	28.31%	
14)	$\frac{224}{98}$	41.96% -> ->	318 141 2.255
	2.286	43.88%	
15)	$\frac{147}{274}$	17.60% <- <-	125 216 0.579
	0.536	26.85%	

3 : 40

J/n
10/1

1)

$$\begin{array}{r} 308 \\ 328 \\ \hline 245 \\ \hline 209 \\ \hline 233 \\ \hline 223 \\ \hline 295 \\ \hline 263 \end{array}$$

$$\begin{array}{r} 4 \\ 1 \\ 3 \\ 2 \\ \hline > \quad > \quad > \quad > \end{array}$$

6)

$$\begin{array}{r} 192 \\ 271 \\ \hline < \end{array}$$

$$\begin{array}{r} 145 \\ 204 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 47 \\ 14 \\ 52 \\ \hline 120 \\ 146 \\ \hline 272 \\ 263 \\ \hline 248 \\ 229 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \\ 4 \\ 2 \\ 1 \\ \hline > \quad > \quad > \quad > \end{array}$$

8)

$$\begin{array}{r} 306 \\ 240 \\ \hline > \end{array}$$

$$\begin{array}{r} 64 \\ 54 \\ \hline 320 \\ 270 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 200 \\ 225 \\ \hline 45 \\ 48 \\ \hline 225 \\ 240 \\ \hline 209 \\ 192 \\ \hline 241 \\ 243 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 3 \\ 2 \\ 1 \\ \hline > \quad > \quad > \quad > \end{array}$$

9)

$$\begin{array}{r} 80 \\ 153 \\ \hline > \end{array}$$

$$\begin{array}{r} 38 \\ 81 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 308 \\ 88 \\ \hline < \end{array}$$

$$\begin{array}{r} 287 \\ 78 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 769 \\ 917 \\ \hline 726 \\ 971 \\ \hline 911 \\ 986 \\ \hline 274 \\ 340 \\ \hline 276 \\ 1020 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \\ 4 \\ 1 \\ 3 \\ \hline > \quad > \quad > \quad > \end{array}$$

11)

$$\begin{array}{r} 240 \\ 332 \\ \hline < \end{array}$$

$$\begin{array}{r} 185 \\ 253 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 343 \\ 438 \\ \hline 505 \\ 675 \\ \hline 719 \\ 840 \\ \hline 893 \\ 912 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \\ 3 \\ 2 \\ 1 \\ \hline > \quad > \quad > \quad > \end{array}$$

12)

$$\begin{array}{r} 18 \\ 111 \\ \hline < \end{array}$$

$$\begin{array}{r} 16 \\ 91 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 169 \\ 173 \\ \hline > \end{array}$$

$$\begin{array}{r} 276 \\ 305 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 243 \\ 103 \\ \hline < \end{array}$$

$$\begin{array}{r} 287 \\ 119 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 165 \\ 242 \\ \hline < \end{array}$$

$$\begin{array}{r} 228 \\ 301 \\ \hline \end{array}$$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{245}{209} > \frac{295}{263} > \frac{233}{223} > \frac{308}{328}$	1.172	1.122	1.045	0.939
----	---	-------	-------	-------	-------

2)	$\frac{248}{229} > \frac{272}{263} > \frac{47}{52} > \frac{120}{146}$	1.083	1.034	0.904	0.822
----	---	-------	-------	-------	-------

3)	$\frac{209}{192} > \frac{241}{243} > \frac{45}{48} > \frac{200}{225}$	1.089	0.992	0.938	0.889
----	---	-------	-------	-------	-------

4)	$\frac{911}{986} > \frac{769}{917} > \frac{274}{340} > \frac{726}{971}$	0.924	0.839	0.806	0.748
----	---	-------	-------	-------	-------

5)	$\frac{893}{912} > \frac{719}{840} > \frac{343}{438} > \frac{505}{675}$	0.979	0.856	0.783	0.748
----	---	-------	-------	-------	-------

6)	$\frac{192}{271}$	32.41% <- 0.708	145 204 0.711
7)	$\frac{177}{187}$	32.84% 61.02% -> 0.947	285 287 0.993
8)	$\frac{306}{240}$	378.13% 344.44% -> 1.275	64 54 1.185
9)	$\frac{80}{153}$	110.53% 88.89% -> 0.523	38 81 0.469
10)	$\frac{308}{88}$	7.32% 12.82% -> 3.500	287 78 3.679
11)	$\frac{240}{332}$	29.73% 31.23% -> 0.723	185 253 0.731
12)	$\frac{18}{111}$	12.50% 21.98% -> 0.162	16 91 0.176
13)	$\frac{169}{173}$	63.31% 76.30% -> 0.977	276 305 0.905
14)	$\frac{243}{103}$	18.11% 15.53% -> 2.359	287 119 2.412
15)	$\frac{165}{242}$	38.18% 24.38% -> 0.682	228 301 0.757

3:55

d/b

10/2

1)

$$\begin{array}{r} 78 \\ \underline{-68} \\ 10 \\ > \end{array} \quad \begin{array}{r} 334 \\ \underline{-307} \\ 27 \\ > \end{array} \quad \begin{array}{r} 299 \\ \underline{-237} \\ 62 \\ > \end{array} \quad \begin{array}{r} 80 \\ \underline{-57} \\ 23 \\ > \end{array}$$

$$4 > 2 > /$$

6)

$$\begin{array}{r} 237 \\ \underline{-284} \\ 47 \\ > \end{array} \quad \begin{array}{r} 125 \\ \underline{-170} \\ 45 \\ > \end{array}$$

10/2

2)

$$\begin{array}{r} 246 \\ \underline{-178} \\ 68 \\ > \end{array} \quad \begin{array}{r} 327 \\ \underline{-189} \\ 38 \\ > \end{array} \quad \begin{array}{r} 241 \\ \underline{-152} \\ 89 \\ > \end{array} \quad \begin{array}{r} 276 \\ \underline{-143} \\ 133 \\ > \end{array}$$

$$4 > 2 > 3 > /$$

8)

$$\begin{array}{r} 194 \\ \underline{-218} \\ -24 \\ < \end{array} \quad \begin{array}{r} 320 \\ \underline{-339} \\ -19 \\ < \end{array}$$

10/2

3)

$$\begin{array}{r} 277 \\ \underline{-315} \\ -38 \\ > \end{array} \quad \begin{array}{r} 228 \\ \underline{-221} \\ 7 \\ > \end{array} \quad \begin{array}{r} 273 \\ \underline{-338} \\ -65 \\ > \end{array} \quad \begin{array}{r} 206 \\ \underline{-225} \\ -19 \\ > \end{array}$$

$$> / > 4 > 2$$

9)

$$\begin{array}{r} 118 \\ \underline{-99} \\ 19 \\ < \end{array} \quad \begin{array}{r} 223 \\ \underline{-165} \\ 58 \\ > \end{array}$$

10/2

10)

$$\begin{array}{r} 208 \\ \underline{-97} \\ 111 \\ < \end{array} \quad \begin{array}{r} 263 \\ \underline{-107} \\ 156 \\ > \end{array}$$

10/2

11)

$$\begin{array}{r} 257 \\ \underline{-47} \\ 210 \\ > \end{array} \quad \begin{array}{r} 197 \\ \underline{-38} \\ 159 \\ < \end{array}$$

10/2

12)

$$\begin{array}{r} 306 \\ \underline{-198} \\ 108 \\ < \end{array} \quad \begin{array}{r} 181 \\ \underline{-106} \\ 75 \\ > \end{array}$$

10/2

13)

$$\begin{array}{r} 39 \\ \underline{-134} \\ 95 \\ < \end{array} \quad \begin{array}{r} 58 \\ \underline{-172} \\ 114 \\ > \end{array}$$

10/2

14)

$$\begin{array}{r} 214 \\ \underline{-164} \\ 50 \\ < \end{array} \quad \begin{array}{r} 222 \\ \underline{-167} \\ 55 \\ > \end{array}$$

10/2

15)

$$\begin{array}{r} 324 \\ \underline{-276} \\ 48 \\ < \end{array} \quad \begin{array}{r} 220 \\ \underline{-164} \\ 56 \\ > \end{array}$$

10/2

4)

$$\begin{array}{r} 545 \\ \underline{-137} \\ 408 \\ > \end{array} \quad \begin{array}{r} 743 \\ \underline{-221} \\ 522 \\ > \end{array} \quad \begin{array}{r} 561 \\ \underline{-185} \\ 376 \\ < \end{array} \quad \begin{array}{r} 558 \\ \underline{-155} \\ 403 \\ > \end{array}$$

54

$$1 > 3 > 4 > 2$$

5)

$$\begin{array}{r} 539 \\ \underline{-591} \\ -52 \\ > \end{array} \quad \begin{array}{r} 544 \\ \underline{-796} \\ -252 \\ > \end{array} \quad \begin{array}{r} 390 \\ \underline{-493} \\ -103 \\ > \end{array} \quad \begin{array}{r} 744 \\ \underline{-724} \\ 20 \\ > \end{array}$$

$$2 > 4 > 3 > 1$$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

8/13
10/1~

1)			
80	>	299	>
57	237	68	307
1.404	1.262	1.147	1.088

6)	237	89.60%	125
	284	<-	170
	0.835	67.06%	0.735

2)			
276	>	327	>
143	189	152	178
1.930	1.730	1.586	1.382

7)	304	55.10%	196
	254	<-	177
	1.197	43.50%	1.107

3)			
228	>	206	>
221	225	315	338
1.032	0.916	0.879	0.808

8)	194	64.95%	320
	218	->	339
	0.890	55.50%	0.944

4)			
545	>	558	>
137	155	221	185
3.978	3.600	3.362	3.032

10)	208	26.44%	263
	97	->	107
	2.144	10.31%	2.458

5)			
744	>	539	>
724	591	493	796
1.028	0.912	0.791	0.683

11)	257	30.46%	197
	47	<-	38
	5.468	23.68%	5.184

12)	306	69.06%	181
	198	->	106
	1.545	86.79%	1.708

13)	39	48.72%	58
	134	->	172
	0.291	28.36%	0.337

14)	214	3.74%	222
	164	->	167
	1.305	1.83%	1.329

15)	324	47.27%	220
	276	<-	164
	1.174	68.29%	1.341

2/14

3

1)

129	172	281	200
171	261	340	324
<hr/>			
_____ > _____ > _____ > _____			

6)

139		266
158		294
<hr/>		

2)

341	332	270	56
298	329	298	67
<hr/>			
_____ > _____ > _____ > _____			

8)

214		291
235		275
<hr/>		

3)

184	115	64	274
153	106	44	218
<hr/>			
_____ > _____ > _____ > _____			

9)

218		104
178		81
<hr/>		

4)

741	870	809	621
935	937	916	875
<hr/>			
_____ > _____ > _____ > _____			

10)

245		136
201		104
<hr/>		

5)

554	579	811	469
356	465	690	349
<hr/>			
_____ > _____ > _____ > _____			

11)

195		240
92		129
<hr/>		

12)

93		78
161		141
<hr/>		

13)

86		144
119		204
<hr/>		

14)

170		182
277		304
<hr/>		

15)

308		248
281		201
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1/4

1)

$$\frac{281}{340} > \frac{129}{171} > \frac{172}{261} > \frac{200}{324}$$

0.826

0.754

0.659

0.617

6)

139

158

0.880

91.37%

->

266

294

86.08%

->

0.905

7)

302

301

1.003

11.03%

<-

272

294

2.38%

->

0.925

8)

214

235

0.911

35.98%

->

291

275

17.02%

->

1.058

9)

218

178

1.225

109.62%

<-

104

81

119.75%

->

1.284

10)

245

201

1.219

80.15%

<-

136

104

93.27%

->

1.308

11)

195

92

2.120

23.08%

->

240

129

40.22%

->

1.860

12)

93

161

0.578

19.23%

<-

78

141

14.18%

->

0.553

13)

86

119

0.723

67.44%

->

144

204

71.43%

->

0.706

14)

170

277

0.614

7.06%

->

182

304

9.75%

->

0.599

15)

308

281

1.096

24.19%

<-

248

201

39.80%

->

1.234

2)

$$\frac{341}{298} > \frac{332}{329} > \frac{270}{298} > \frac{56}{67}$$

1.144

1.009

0.906

0.836

3)

$$\frac{64}{44} > \frac{274}{218} > \frac{184}{153} > \frac{115}{106}$$

1.455

1.257

1.203

1.085

4)

$$\frac{870}{937} > \frac{809}{916} > \frac{741}{935} > \frac{621}{875}$$

0.928

0.883

0.793

0.710

5)

$$\frac{554}{356} > \frac{469}{349} > \frac{579}{465} > \frac{811}{690}$$

1.556

1.344

1.245

1.175

J/J
4

1)

276	319	298	304
92	94	76	81
<hr/>			
_____ > _____ > _____ > _____			

6)

278		302
276		336
<hr/>		

2)

200	194	231	235
255	210	272	236
<hr/>			
_____ > _____ > _____ > _____			

8)

187		75
339		136
<hr/>		

3)

257	214	324	260
278	219	294	213
<hr/>			
_____ > _____ > _____ > _____			

10)

53		40
33		25
<hr/>		

4)

983	262	940	755
921	260	780	794
<hr/>			
_____ > _____ > _____ > _____			

11)

292		84
319		100
<hr/>		

5)

59	282	922	846
76	316	874	889
<hr/>			
_____ > _____ > _____ > _____			

13)

233		103
223		92
<hr/>		

14)

79		56
75		52
<hr/>		

15)

331		59
167		29
<hr/>		

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00" : Acceptable	
5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1/15

1)	$\frac{298}{76} > \frac{304}{81} > \frac{319}{94} > \frac{276}{92}$
3.921	3.753

2)	$\frac{235}{236} > \frac{194}{210} > \frac{231}{272} > \frac{200}{255}$
0.996	0.924

3)	$\frac{260}{213} > \frac{324}{294} > \frac{214}{219} > \frac{257}{278}$
1.221	1.102

4)	$\frac{940}{780} > \frac{983}{921} > \frac{262}{260} > \frac{755}{794}$
1.205	1.067

5)	$\frac{922}{874} > \frac{846}{889} > \frac{282}{316} > \frac{59}{76}$
1.055	0.952

6)	$\frac{278}{276} > \frac{276}{1.007}$
302	336
0.899	
8.63%	
->	
21.74%	
28.50%	
<-	
39.25%	
149.33%	
<-	
149.26%	
98.06%	
<-	
129.73%	
32.50%	
<-	
32.00%	
247.62%	
<-	
219.00%	
79.43%	
<-	
99.13%	
126.21%	
<-	
142.39%	
41.07%	
<-	
44.23%	
461.02%	
<-	
475.86%	

$\gamma = 15$

1) $\begin{array}{r} 192 \\ - 200 \\ \hline 238 \end{array}$ $\begin{array}{r} 270 \\ - 258 \\ \hline 145 \end{array}$ $\begin{array}{r} 131 \\ - 145 \\ \hline 145 \end{array}$

$\textcircled{1} > \textcircled{2} > \textcircled{3} > \textcircled{4}$

2) $\begin{array}{r} 285 \\ - 305 \\ \hline 146 \end{array}$ $\begin{array}{r} 260 \\ - 218 \\ \hline 330 \end{array}$ $\begin{array}{r} 334 \\ - 330 \\ \hline \end{array}$

$\textcircled{4} > \textcircled{2} > \textcircled{1} > \textcircled{3}$

3) $\begin{array}{r} 181 \\ - 180 \\ \hline 147 \end{array}$ $\begin{array}{r} 242 \\ - 251 \\ \hline 310 \end{array}$

$\textcircled{1} > \textcircled{3} > \textcircled{2} > \textcircled{4}$

4) $\begin{array}{r} 394 \\ - 490 \\ \hline 725 \end{array}$ $\begin{array}{r} 598 \\ - 899 \\ \hline 645 \end{array}$

$\textcircled{2} > \textcircled{1} > \textcircled{4} > \textcircled{3}$

5) $\begin{array}{r} 294 \\ - 469 \\ \hline 263 \end{array}$ $\begin{array}{r} 330 \\ - 571 \\ \hline 818 \end{array}$

$\textcircled{2} > \textcircled{1} > \textcircled{4} > \textcircled{3}$

6) $\begin{array}{r} 334 \\ - 315 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 150 \\ - 154 \\ \hline \end{array}$

7) $\begin{array}{r} 63 \\ - 143 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 42 \\ - 102 \\ \hline \end{array}$

8) $\begin{array}{r} 182 \\ - 169 \\ \hline \end{array}$ $\boxed{<} \quad \begin{array}{r} 225 \\ - 186 \\ \hline \end{array}$

9) $\begin{array}{r} 194 \\ - 262 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 226 \\ - 335 \\ \hline \end{array}$

10) $\begin{array}{r} 140 \\ - 228 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 163 \\ - 273 \\ \hline \end{array}$

11) $\begin{array}{r} 137 \\ - 283 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 32 \\ - 73 \\ \hline \end{array}$

12) $\begin{array}{r} 186 \\ - 261 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 217 \\ - 320 \\ \hline \end{array}$

13) $\begin{array}{r} 170 \\ - 152 \\ \hline \end{array}$ $\boxed{>} \quad \begin{array}{r} 269 \\ - 242 \\ \hline \end{array}$

14) $\begin{array}{r} 283 \\ - 320 \\ \hline \end{array}$ $\boxed{<} \quad \begin{array}{r} 72 \\ - 76 \\ \hline \end{array}$

15) $\begin{array}{r} 103 \\ - 292 \\ \hline \end{array}$ $\boxed{<} \quad \begin{array}{r} 30 \\ - 76 \\ \hline \end{array}$

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

8/16
5

1)

$$\frac{200}{167} > \frac{270}{258} > \frac{131}{145} > \frac{192}{238}$$

1.198

1.047

0.903

0.807

2)

$$\frac{260}{218} > \frac{164}{146} > \frac{334}{330} > \frac{285}{305}$$

1.193

1.123

1.012

0.934

3)

$$\frac{181}{180} > \frac{242}{251} > \frac{147}{167} > \frac{253}{310}$$

1.006

0.964

0.880

0.816

4)

$$\frac{725}{860} > \frac{394}{490} > \frac{645}{878} > \frac{598}{899}$$

0.843

0.804

0.735

0.665

5)

$$\frac{263}{360} > \frac{570}{818} > \frac{294}{469} > \frac{330}{571}$$

0.731

0.697

0.627

0.578

6)

$$\frac{334}{315} < \frac{1.060}{1.060}$$

122.67%

<-

$\frac{150}{154}$

104.55%

<-

$\frac{0.974}{0.974}$

7)

$$\frac{63}{143} < \frac{0.441}{0.441}$$

50.00%

<-

$\frac{42}{102}$

40.20%

<-

$\frac{0.412}{0.412}$

8)

$$\frac{182}{169} > \frac{1.077}{1.077}$$

23.63%

>-

$\frac{225}{186}$

10.06%

>-

$\frac{1.210}{1.210}$

9)

$$\frac{194}{262} > \frac{0.740}{0.740}$$

16.49%

>-

$\frac{226}{335}$

27.86%

>-

$\frac{0.675}{0.675}$

10)

$$\frac{140}{228} > \frac{0.614}{0.614}$$

16.43%

>-

$\frac{163}{273}$

19.74%

>-

$\frac{0.597}{0.597}$

11)

$$\frac{137}{283} < \frac{0.484}{0.484}$$

328.13%

<-

$\frac{32}{73}$

287.67%

<-

$\frac{0.438}{0.438}$

12)

$$\frac{186}{261} > \frac{0.713}{0.713}$$

16.67%

>-

$\frac{217}{320}$

22.61%

>-

$\frac{0.678}{0.678}$

13)

$$\frac{170}{152} > \frac{1.118}{1.118}$$

58.24%

>-

$\frac{269}{242}$

59.21%

>-

$\frac{1.112}{1.112}$

14)

$$\frac{283}{320} < \frac{0.884}{0.884}$$

293.06%

<-

$\frac{72}{76}$

321.05%

<-

$\frac{0.947}{0.947}$

15)

$$\frac{103}{292} < \frac{0.353}{0.353}$$

243.33%

<-

$\frac{30}{76}$

284.21%

<-

$\frac{0.395}{0.395}$

3 : 43

8/17
10/6

1)

$$\begin{array}{r} 263 \\ 291 \\ \hline 164 \\ 150 \\ \hline 278 \\ 278 \\ \hline 189 \\ 197 \\ \hline \end{array}$$

$$\underline{4} > \underline{1} > \underline{2} > \underline{3}$$

2)

$$\begin{array}{r} 233 \\ 310 \\ \hline 157 \\ 195 \\ \hline 240 \\ 270 \\ \hline 78 \\ 111 \\ \hline \end{array}$$

$$\underline{3} > \underline{2} > \underline{1} > \underline{4}$$

3)

$$\begin{array}{r} 164 \\ 228 \\ \hline 259 \\ 312 \\ \hline 280 \\ 306 \\ \hline 166 \\ 253 \\ \hline \end{array}$$

$$\underline{3} > \underline{2} > \underline{1} > \underline{4}$$

~~4)~~

$$\begin{array}{r} 950 \\ 634 \\ \hline 546 \\ 394 \\ \hline 798 \\ 668 \\ \hline 969 \\ 769 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 557 \\ 521 \\ \hline 810 \\ 821 \\ \hline 811 \\ 712 \\ \hline 589 \\ 670 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{1} > \underline{4}$$

6)

$$\begin{array}{r} 218 \\ 264 \\ \hline \end{array} < \begin{array}{r} 165 \\ 188 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 220 \\ 241 \\ \hline \end{array} > \begin{array}{r} 286 \\ 334 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 130 \\ 278 \\ \hline \end{array} > \begin{array}{r} 117 \\ 263 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 192 \\ 137 \\ \hline \end{array} < \begin{array}{r} 325 \\ 203 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 106 \\ 132 \\ \hline \end{array} > \begin{array}{r} 219 \\ 307 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 293 \\ 343 \\ \hline \end{array} > \begin{array}{r} 178 \\ 232 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 78 \\ 287 \\ \hline \end{array} < \begin{array}{r} 156 \\ 146 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 224 \\ 67 \\ \hline \end{array} > \begin{array}{r} 125 \\ 38 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 138 \\ 36 \\ \hline \end{array} < \begin{array}{r} 251 \\ 61 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 109 \\ 310 \\ \hline \end{array} < \begin{array}{r} 117 \\ 310 \\ \hline \end{array}$$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{164}{150} > \frac{278}{278} > \frac{189}{197} > \frac{263}{291}$	1.093	1.000	0.959	0.904
----	---	-------	-------	-------	-------

2)	$\frac{240}{270} > \frac{157}{195} > \frac{233}{310} > \frac{78}{111}$	0.889	0.805	0.752	0.703
----	--	-------	-------	-------	-------

3)	$\frac{280}{306} > \frac{259}{312} > \frac{164}{228} > \frac{166}{253}$	0.915	0.830	0.719	0.656
----	---	-------	-------	-------	-------

4)	$\frac{950}{634} > \frac{546}{394} > \frac{969}{769} > \frac{798}{668}$	1.498	1.386	1.260	1.195
----	---	-------	-------	-------	-------

5)	$\frac{811}{712} > \frac{557}{521} > \frac{810}{821} > \frac{589}{670}$	1.139	1.069	0.987	0.879
----	---	-------	-------	-------	-------

6)	$\frac{218}{264}$	32.12%	<-	165	10/6
	0.826	40.43%	<-	188	
7)	$\frac{220}{241}$	30.00%	->	286	
	0.913	38.59%	->	334	
8)	$\frac{130}{278}$	11.11%	<-	117	
	0.468	5.70%	<-	263	
9)	$\frac{192}{137}$	69.27%	->	325	
	1.401	48.18%	->	203	
10)	$\frac{106}{132}$	106.60%	->	219	
	0.803	132.58%	->	307	
11)	$\frac{293}{343}$	64.61%	<-	178	
	0.854	47.84%	<-	232	
12)	$\frac{78}{287}$	95.00%	<-	40	
	0.272	96.58%	<-	146	
13)	$\frac{224}{67}$	79.20%	<-	125	
	3.343	76.32%	<-	38	
14)	$\frac{138}{36}$	81.88%	->	3.289	
	3.833	69.44%	->	251	
15)	$\frac{109}{310}$	7.34%	->	61	
	0.352	0.00%	->	4.115	
				117	
				310	
				0.377	

10/1

4:24

1) ~~193 62~~ ~~88 38~~ ~~230 24~~ ~~144 55~~

$$\begin{array}{r} 193 \\ \underline{-131} \\ 62 \end{array}$$

$$\begin{array}{r} 88 \\ \underline{-50} \\ 38 \end{array}$$

$$\begin{array}{r} 230 \\ \underline{-136} \\ 144 \end{array}$$

$$\begin{array}{r} 144 \\ \underline{-89} \\ 55 \end{array}$$

4 > 1 > 2 > 3

2) $\begin{array}{r} 257 \\ \underline{-221} \\ 36 \end{array}$ $\begin{array}{r} 303 \\ \underline{-275} \\ 28 \end{array}$ $\begin{array}{r} 267 \\ \underline{-218} \\ 49 \end{array}$ $\begin{array}{r} 314 \\ \underline{-320} \\ -6 \end{array}$

2 > 3 > 1 > 4

3) $\begin{array}{r} 166 \\ \underline{-279} \\ -113 \end{array}$ $\begin{array}{r} 111 \\ \underline{-245} \\ -134 \end{array}$ $\begin{array}{r} 183 \\ \underline{-321} \\ -138 \end{array}$ $\begin{array}{r} 119 \\ \underline{-242} \\ -123 \end{array}$

1 > 4 > 2 > 3

4) $\begin{array}{r} 477 \\ \underline{-398} \\ 79 \end{array}$ $\begin{array}{r} 783 \\ \underline{-605} \\ 178 \end{array}$ $\begin{array}{r} 866 \\ \underline{-842} \\ 24 \end{array}$ $\begin{array}{r} 801 \\ \underline{-702} \\ 99 \end{array}$

2 > 1 > 4 > 3

5) $\begin{array}{r} 238 \\ \underline{-351} \\ -113 \end{array}$ $\begin{array}{r} 742 \\ \underline{-779} \\ -37 \end{array}$ $\begin{array}{r} 682 \\ \underline{-870} \\ -188 \end{array}$ $\begin{array}{r} 807 \\ \underline{-916} \\ -109 \end{array}$

4 > 1 > 3 > 2

6) $\begin{array}{r} 140 \\ \underline{-307} \\ -167 \end{array}$ > $\begin{array}{r} 114 \\ \underline{-280} \\ -166 \end{array}$

7) $\begin{array}{r} 173 \\ \underline{-256} \\ -83 \end{array}$ < $\begin{array}{r} 201 \\ \underline{-297} \\ -96 \end{array}$

8) $\begin{array}{r} 180 \\ \underline{-90} \\ 90 \end{array}$ < $\begin{array}{r} 217 \\ \underline{-107} \\ 110 \end{array}$

9) $\begin{array}{r} 281 \\ \underline{-330} \\ -49 \end{array}$ > $\begin{array}{r} 114 \\ \underline{-146} \\ -32 \end{array}$

10) $\begin{array}{r} 28 \\ \underline{-210} \\ -182 \end{array}$ > $\begin{array}{r} 36 \\ \underline{-279} \\ -243 \end{array}$

11) $\begin{array}{r} 194 \\ \underline{-285} \\ -91 \end{array}$ < $\begin{array}{r} 170 \\ \underline{-226} \\ -56 \end{array}$

12) $\begin{array}{r} 276 \\ \underline{-213} \\ 63 \end{array}$ < $\begin{array}{r} 120 \\ \underline{-92} \\ 28 \end{array}$

13) $\begin{array}{r} 266 \\ \underline{-319} \\ -53 \end{array}$ < $\begin{array}{r} 153 \\ \underline{-180} \\ -27 \end{array}$

14) $\begin{array}{r} 245 \\ \underline{-132} \\ 113 \end{array}$ > $\begin{array}{r} 298 \\ \underline{-170} \\ 128 \end{array}$

15) $\begin{array}{r} 120 \\ \underline{-290} \\ -170 \end{array}$ < $\begin{array}{r} 146 \\ \underline{-319} \\ -173 \end{array}$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)
$\frac{88}{50} > \frac{230}{136} > \frac{144}{89} > \frac{193}{131}$
1.760
1.691
1.618
1.473

2)
$\frac{267}{218} > \frac{257}{221} > \frac{303}{275} > \frac{314}{320}$
1.225
1.163
1.102
0.981

3)
$\frac{166}{279} > \frac{183}{321} > \frac{119}{242} > \frac{111}{245}$
0.595
0.570
0.492
0.453

4)
$\frac{783}{605} > \frac{477}{398} > \frac{801}{702} > \frac{866}{842}$
1.294
1.198
1.141
1.029

5)
$\frac{742}{779} > \frac{807}{916} > \frac{682}{870} > \frac{238}{351}$
0.953
0.881
0.784
0.678

6)	140	22.81%	114
	307	<-	280
	0.456	<-	0.407
		9.64%	
7)	173	16.18%	201
	256	->	297
	0.676	->	0.677
		16.02%	
8)	180	20.56%	217
	90	->	107
	2.000	->	2.028
		18.89%	
9)	281	146.49%	114
	330	<-	146
	0.852	<-	0.781
		126.03%	
10)	28	28.57%	36
	210	->	279
	0.133	->	0.129
		32.86%	
11)	194	14.12%	170
	285	<-	226
	0.681	<-	0.752
		26.11%	
12)	276	130.00%	120
	213	<-	92
	1.296	<-	1.304
		131.52%	
13)	266	73.86%	153
	319	<-	180
	0.834	<-	0.850
		77.22%	
14)	245	21.63%	298
	132	->	170
	1.856	->	1.753
		28.79%	
15)	120	21.67%	146
	290	->	319
	0.414	->	0.458
		10.00%	

~~1)~~

134	157	229	190
235	196	323	291

4 > 1 > 2 > ?

2)

114	250	189	285
111	258	173	241

3 > 4 > 2 > 1

3)

197	183	296	260
165	173	294	296

1 > 2 > 3 > 4

4)

695	987	680	756
613	908	715	630

2 > 3 > 4 > 1

5)

371	318	59	185
798	777	175	508

1 > 2 > 4 > 3

6)

224	170	?	177
127	58		177

7)

242	171	?	88
67			67

8)

266	195	?	232
162			162

9)

320	233	?	179
132			132

10)

100	60	?	282
153			153

11)

259	117	?	91
37			37

12)

127	338	?	41
104			104

13)

248	178	?	325
252			252

14)

148	299	?	90
160			160

15)

333	311	?	96
91			91

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15" is added
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problems

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5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)						
157	>	229	>	190	>	134
196		323		291		235
0.801		0.709		0.653		0.570

2)						
285	>	189	>	114	>	250
241		173		111		258
1.183		1.092		1.027		0.969

3)						
197	>	183	>	296	>	260
165		173		294		296
1.194		1.058		1.007		0.878

4)						
756	>	695	>	987	>	680
630		613		908		715
1.200		1.134		1.087		0.951

5)						
371	>	318	>	185	>	59
798		777		508		175
0.465		0.409		0.364		0.337

6)	224	26.55%	177
	170	<-	127
	1.318	33.86%	1.394
		175.00%	
7)	242	<-	88
	171	<-	67
	1.415	155.22%	1.313
		14.66%	
8)	266	<-	232
	195	<-	162
	1.364	20.37%	1.432
		78.77%	
9)	320	<-	179
	233	<-	132
	1.373	76.52%	1.356
		182.00%	
10)	100	->	282
	60	->	153
	1.667	155.00%	1.843
		184.62%	
11)	259	<-	91
	117	<-	37
	2.214	216.22%	2.459
		209.76%	
12)	127	<-	41
	338	<-	104
	0.376	225.00%	0.394
		31.05%	
13)	248	->	325
	178	->	252
	1.393	41.57%	1.290
		64.44%	
14)	148	<-	90
	299	<-	160
	0.495	86.88%	0.563
		246.88%	
15)	333	<-	96
	311	<-	91
	1.071	241.76%	1.055

4: 15

1)

$$\begin{array}{r} 212 \\ 325 \\ \hline 168 \\ 240 \\ \hline 113 \\ 207 \\ \hline 181 \\ 306 \end{array}$$

$$\underline{2} > \underline{1} > \underline{4} > \underline{3}$$

~~210~~

2)

$$\begin{array}{r} 196 \\ 180 \\ \hline 32 \\ 30 \\ \hline 228 \\ 204 \\ \hline 124 \\ 132 \\ \hline 206 \\ 167 \end{array}$$

$$\underline{3} > \underline{2} > \underline{4} > \underline{1}$$

$$\begin{array}{r} 70 \\ 31 \\ \hline 298 \\ 269 \\ \hline 46 \\ 232 \\ 193 \\ \hline 80 \\ 318 \\ 235 \\ \hline 339 \\ 270 \end{array}$$

$$\underline{4} > \underline{3} > \underline{1} > \underline{2}$$

4)

$$\begin{array}{r} 916 \\ 902 \\ \hline 489 \\ 553 \\ \hline 607 \\ 635 \\ \hline 164 \\ 207 \end{array}$$

$$\underline{1} > \underline{3} > \underline{2} > \underline{4}$$

$$\begin{array}{r} 150 \\ 144 \\ \hline 598 \\ 450 \\ \hline 220 \\ 394 \\ \hline 160 \\ 745 \\ \hline 80 \\ 174 \end{array}$$

$$\underline{3} > \underline{1} > \underline{4} > \underline{2}$$

~~150~~

6)

$$\begin{array}{r} 154 \\ 220 \\ \hline \end{array} > \boxed{} - \frac{87}{138}$$

7)

$$\begin{array}{r} 63 \\ 101 \\ \hline \end{array} < \boxed{} - \frac{121}{173}$$

8)

$$\begin{array}{r} 137 \\ 28 \\ \hline \end{array} > \boxed{} - \frac{62}{13}$$

9)

$$\begin{array}{r} 304 \\ 337 \\ \hline \end{array} < \boxed{} - \frac{206}{202}$$

10)

$$\begin{array}{r} 224 \\ 149 \\ \hline \end{array} > \boxed{} - \frac{131}{98}$$

11)

$$\begin{array}{r} 224 \\ 127 \\ \hline \end{array} > \boxed{} - \frac{264}{164}$$

12)

$$\begin{array}{r} 316 \\ 84 \\ \hline \end{array} < \boxed{} - \frac{275}{64}$$

13)

$$\begin{array}{r} 141 \\ 82 \\ \hline \end{array} > \boxed{} - \frac{36}{23} \text{ P2}$$

14)

$$\begin{array}{r} 93 \\ 204 \\ \hline \end{array} < \boxed{} - \frac{150}{317}$$

15)

$$\begin{array}{r} 186 \\ 97 \\ \hline \end{array} < \boxed{} - \frac{285}{138}$$

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6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

19/P

1)

$$\frac{168}{240} > \frac{212}{325} > \frac{181}{306} > \frac{113}{207}$$

0.700	0.652	0.592	0.546
-------	-------	-------	-------

2)

$$\frac{206}{167} > \frac{228}{204} > \frac{32}{30} > \frac{124}{132}$$

1.234	1.118	1.067	0.939
-------	-------	-------	-------

3)

$$\frac{318}{235} > \frac{339}{270} > \frac{232}{193} > \frac{298}{269}$$

1.353	1.256	1.202	1.108
-------	-------	-------	-------

4)

$$\frac{916}{902} > \frac{607}{635} > \frac{489}{553} > \frac{164}{207}$$

1.016	0.956	0.884	0.792
-------	-------	-------	-------

5)

$$\frac{616}{394} > \frac{252}{174} > \frac{598}{450} > \frac{909}{745}$$

1.563	1.448	1.329	1.220
-------	-------	-------	-------

6)

$$\frac{154}{220}$$

0.700

7)

$$\frac{63}{101}$$

0.624

8)

$$\frac{137}{28}$$

4.893

9)

$$\frac{304}{337}$$

0.902

10)

$$\frac{224}{149}$$

1.503

11)

$$\frac{224}{127}$$

1.764

12)

$$\frac{316}{84}$$

3.762

13)

$$\frac{141}{82}$$

1.720

14)

$$\frac{93}{204}$$

0.456

15)

$$\frac{186}{97}$$

1.918

77.01%

<-

87

138

0.630

92.06%

->

121

173

0.699

120.97%

<-

62

13

4.769

47.57%

<-

206

202

1.020

70.99%

<-

131

98

1.337

17.86%

->

264

164

1.610

14.91%

<-

275

64

4.297

291.67%

<-

36

23

1.565

61.29%

->

150

317

0.473

53.23%

->

285

138

2.065

4:48

1) $\begin{array}{r} 70 \\ 217 \quad 60 \\ \hline 186 \quad 211 \end{array}$ $\begin{array}{r} 80 \\ 182 \quad 334 \\ \hline 175 \quad 258 \end{array}$

$\underline{3} > \underline{1} > \underline{4} > \underline{2}$

2) $\begin{array}{r} 143 \quad 322 \quad 143 \quad 242 \\ \hline 166 \quad 323 \quad 194 \quad 308 \end{array}$

$\underline{2} > \underline{1} > \underline{4} > \underline{3}$

3) $\begin{array}{r} 43 \quad 110 \quad 90 \quad 160 \\ \hline 60 \quad 137 \quad 106 \quad 171 \end{array}$

$\underline{4} > \underline{3} > \underline{2} > \underline{1}$

4) $\begin{array}{r} 526 \quad 200 \quad 259 \quad 482 \\ \hline 957 \quad 302 \quad 527 \quad 757 \end{array}$

$\underline{3} > \underline{1} > \underline{4} > \underline{2}$

5) $\begin{array}{r} 305 \quad 472 \quad 258 \quad 173 \\ \hline 665 \quad 801 \quad 498 \quad 393 \end{array}$

$\underline{3} > \underline{1} > \underline{2} > \underline{4}$

6) $\begin{array}{r} 283 \quad > \quad 289 \\ \hline 230 \quad 255 \end{array}$

~~7)~~ $\begin{array}{r} 219 \quad > \quad 180 \\ \hline 302 \quad 126 \end{array}$

$\frac{26}{252} = \frac{180}{302.4}$

8) $\begin{array}{r} 313 \quad < \quad 205 \\ \hline 171 \quad 126 \end{array}$

9) $\begin{array}{r} 169 \quad < \quad 253 \\ \hline 254 \quad 334 \end{array}$

10) $\begin{array}{r} 137 \quad > \quad 266 \\ \hline 147 \quad 304 \end{array}$

11) $\begin{array}{r} 273 \quad < \quad 221 \\ \hline 311 \quad 261 \end{array}$

12) $\begin{array}{r} 257 \quad < \quad 195 \\ \hline 228 \quad 164 \end{array}$

13) $\begin{array}{r} 332 \quad < \quad 308 \\ \hline 250 \quad 211 \end{array}$

14) $\begin{array}{r} 286 \quad < \quad 330 \\ \hline 24 \quad 26 \end{array}$

15) $\begin{array}{r} 291 \quad < \quad 146 \\ \hline 117 \quad 51 \end{array}$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)						
211	>	334	>	217	>	182
151		258		186		175
1.397		1.295		1.167		1.040

2)						
322	>	143	>	242	>	143
323		166		308		194
0.997		0.861		0.786		0.737

3)						
160	>	90	>	110	>	43
171		106		137		60
0.936		0.849		0.803		0.717

4)						
200	>	482	>	526	>	259
302		757		957		527
0.662		0.637		0.550		0.491

5)						
472	>	258	>	305	>	173
801		498		665		393
0.589		0.518		0.459		0.440

6)	283	2.12%	289
	230	->	255
	1.230	10.87%	1.133
7)	219	143.33%	90
	302	<-	126
	0.725	139.68%	0.714
8)	313	52.68%	205
	171	<-	126
	1.830	35.71%	1.627
9)	169	49.70%	253
	254	->	334
	0.665	31.50%	0.757
10)	137	94.16%	266
	147	->	304
	0.932	106.80%	0.875
11)	273	23.53%	221
	311	<-	261
	0.878	19.16%	0.847
12)	257	31.79%	195
	228	<-	164
	1.127	39.02%	1.189
13)	332	7.79%	308
	250	<-	211
	1.328	18.48%	1.460
14)	286	15.38%	330
	24	->	26
	11.917	8.33%	12.692
15)	291	99.32%	146
	117	<-	51
	2.487	129.41%	2.863

5:30

~~1)~~

$$\begin{array}{r} 73 \\ \underline{- 119} \\ 40 \end{array}$$

$$\begin{array}{r} 69 \\ \underline{- 101} \\ 30 \end{array}$$

$$\begin{array}{r} 258 \\ \underline{- 338} \\ 170 \end{array}$$

$$\begin{array}{r} 171 \\ \underline{- 265} \\ 106 \end{array}$$

4 > 2 > 1 > 3

~~2)~~

$$\begin{array}{r} 85 \\ \underline{- 206} \\ 121 \end{array}$$

$$\begin{array}{r} 66 \\ \underline{- 134} \\ 68 \end{array}$$

$$\begin{array}{r} 47 \\ \underline{- 104} \\ 43 \end{array}$$

$$\begin{array}{r} 110 \\ \underline{- 202} \\ 92 \end{array}$$

4 > 2 > 3 > 1

~~3)~~

$$\begin{array}{r} 168 \\ \underline{- 198} \\ 30 \end{array}$$

$$\begin{array}{r} 205 \\ \underline{- 203} \\ 2 \end{array}$$

$$\begin{array}{r} 217 \\ \underline{- 291} \\ 80 \end{array}$$

$$\begin{array}{r} 282 \\ \underline{- 319} \\ 37 \end{array}$$

3 > 1 > 4 > 2

~~4)~~

$$\begin{array}{r} 289 \\ \underline{- 245} \\ 44 \end{array}$$

$$\begin{array}{r} 789 \\ \underline{- 826} \\ 63 \end{array}$$

$$\begin{array}{r} 849 \\ \underline{- 807} \\ 42 \end{array}$$

$$\begin{array}{r} 538 \\ \underline{- 490} \\ 48 \end{array}$$

2 > 4 > 3 > 1

~~5)~~

$$\begin{array}{r} 984 \\ \underline{- 655} \\ 329 \end{array}$$

$$\begin{array}{r} 495 \\ \underline{- 393} \\ 102 \end{array}$$

$$\begin{array}{r} 649 \\ \underline{- 461} \\ 188 \end{array}$$

$$\begin{array}{r} 955 \\ \underline{- 610} \\ 345 \end{array}$$

2 > 4 > 3 > 1

6)

$$\begin{array}{r} 194 \\ \underline{- 281} \\ 187 \end{array}$$

1 < 2

7)

$$\begin{array}{r} 102 \\ \underline{- 280} \\ 178 \end{array}$$

1 < 2

8)

$$\begin{array}{r} 174 \\ \underline{- 54} \\ 120 \end{array}$$

1 > 2

9)

$$\begin{array}{r} 191 \\ \underline{- 286} \\ 195 \end{array}$$

1 < 2

10)

$$\begin{array}{r} 276 \\ \underline{- 288} \\ 12 \end{array}$$

1 < 2

11)

$$\begin{array}{r} 63 \\ \underline{- 21} \\ 42 \end{array}$$

1 < 2

12)

$$\begin{array}{r} 225 \\ \underline{- 86} \\ 139 \end{array}$$

1 > 2

13)

$$\begin{array}{r} 248 \\ \underline{- 235} \\ 13 \end{array}$$

1 < 2

14)

~~$$\begin{array}{r} 269 \\ \underline{- 285} \\ 174 \end{array}$$~~

$$\begin{array}{r} 269 \\ \underline{- 177} \\ 92 \end{array}$$

1 < 2

15)

$$\begin{array}{r} 211 \\ \underline{- 132} \\ 79 \end{array}$$

1 < 2

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{258}{338} > \frac{69}{101} > \frac{171}{265} > \frac{73}{119}$		
0.763	0.683	0.645	0.613

2)	$\frac{110}{202} > \frac{66}{134} > \frac{47}{104} > \frac{85}{206}$		
0.545	0.493	0.452	0.413

3)	$\frac{205}{203} > \frac{282}{319} > \frac{168}{198} > \frac{217}{291}$		
1.010	0.884	0.848	0.746

4)	$\frac{289}{245} > \frac{538}{490} > \frac{849}{807} > \frac{789}{826}$		
1.180	1.098	1.052	0.955

5)	$\frac{955}{610} > \frac{984}{655} > \frac{649}{461} > \frac{495}{393}$		
1.566	1.502	1.408	1.260

6)	$\frac{194}{281}$	67.24%	116
	0.690	<-	164
		71.34%	0.707
7)	$\frac{102}{280}$	200.00%	34
	0.364	<-	84
		233.33%	0.405
8)	$\frac{174}{54}$	34.48%	234
	3.222	->	78
		44.44%	3.000
9)	$\frac{191}{140}$	65.45%	316
	1.364	->	230
		64.29%	1.374
10)	$\frac{276}{288}$	249.37%	79
	0.958	<-	73
		294.52%	1.082
11)	$\frac{63}{21}$	201.59%	190
	3.000	->	58
		176.19%	3.276
12)	$\frac{225}{86}$	28.57%	175
	2.616	<-	70
		22.86%	2.500
13)	$\frac{248}{235}$	5.98%	234
	1.055	<-	207
		13.53%	1.130
14)	$\frac{269}{177}$	14.50%	308
	1.520	->	198
		11.86%	1.556
15)	$\frac{211}{132}$	14.67%	184
	1.598	<-	99
		33.33%	1.859

3:50

1)

143	281	245	269
194	<u>278</u>	<u>279</u>	331

4 > 1 > 2 > 3

6)

54	122
108	228

↙ ↘ <

2)

106	59	62	90
307	218	216	274

1 > 4 > 3 > 2

7)

216	203
157	135

<

3)

294	195	319	87
129	97	177	54

1 > 2 > 3 > 4

10)

200	77
326	117

↙ ↘ <

4)

814	533	737	884
800	712	897	945

1 > 4 > 3 > 2

11)

150	304
100	207

↙ ↘ >

12)

253	149
332	214

>

13)

250	214
311	262

<

14)

84	137
171	240

<

15)

316	334
124	144

>

5)

641	134 ↗	585	789
795	181 ↗	647	800

4 > 3 > 2 > 1
7 > b ↗ > 2 > 1
b ↗
↖ ↘

For each incorrect answer, 15" is added to the time taken to solve problems

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5'00"~5'30"	: Average
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4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{281}{278} > \frac{245}{279} > \frac{269}{331} > \frac{143}{194}$
1.011	0.878
0.813	0.737

2)	$\frac{106}{307} > \frac{90}{274} > \frac{62}{216} > \frac{59}{218}$
0.345	0.328
0.287	0.271

3)	$\frac{294}{129} > \frac{195}{97} > \frac{319}{177} > \frac{87}{54}$
2.279	2.010
1.802	1.611

4)	$\frac{814}{800} > \frac{884}{945} > \frac{737}{897} > \frac{533}{712}$
1.018	0.935
0.822	0.749

5)	$\frac{789}{800} > \frac{585}{647} > \frac{641}{795} > \frac{134}{181}$
0.986	0.904
0.806	0.740

6)	$\frac{54}{108} > \frac{0.500}{0.535}$
125.93%	->
111.11%	->
6.40%	<-
16.30%	<-
156.16%	<-
153.91%	<-
25.00%	<-
36.73%	<-
159.74%	<-
178.63%	<-
102.67%	<-
69.80%	<-
55.14%	<-
16.82%	<-
18.70%	<-
63.10%	<-
40.35%	<-
5.70%	<-
16.13%	<-

1)

$$\begin{array}{r} 76 \\ 88 \\ \hline 151 \\ 141 \\ \hline 198 \\ 253 \\ \hline 139 \\ 146 \\ \hline \end{array}$$

3 > 1 > 4 > 2

6) 50
185

$$\begin{array}{r} 75 \\ 94 \\ \hline \end{array}$$

> 143
183

2)

$$\begin{array}{r} 284 \\ 120 \\ \hline 246 \\ 115 \\ \hline 335 \\ 170 \\ \hline 238 \\ 129 \\ \hline \end{array}$$

1 > 2 > 3 > 4

8)

$$\begin{array}{r} 155 \\ 152 \\ \hline \end{array}$$

< 76
69

3)

$$\begin{array}{r} 260 \\ 125 \\ \hline 267 \\ 116 \\ \hline 304 \\ 177 \\ \hline 305 \\ 162 \\ \hline \end{array}$$

2 > 1 > 4 > 3

9)

$$\begin{array}{r} 251 \\ 164 \\ \hline \end{array}$$

> 223
161

4)

$$\begin{array}{r} 434 \\ 405 \\ \hline 871 \\ 754 \\ \hline 914 \\ 945 \\ \hline 490 \\ 404 \\ \hline \end{array}$$

3 > 2 > 4 > 1

10)

$$\begin{array}{r} 214 \\ 271 \\ \hline \end{array}$$

< 157
175

5)

$$\begin{array}{r} 251 \\ 869 \\ \hline 231 \\ 913 \\ \hline 271 \\ 894 \\ \hline 150 \\ 431 \\ \hline \end{array}$$

7 > 4 > 2 > 1

11)

$$\begin{array}{r} 87 \\ 147 \\ \hline \end{array}$$

> 127
220

12)

$$\begin{array}{r} 163 \\ 248 \\ \hline \end{array}$$

OK 88
131 196
262

13)

$$\begin{array}{r} 134 \\ 100 \\ \hline \end{array}$$

> 244
198

14)

$$\begin{array}{r} 332 \\ 199 \\ \hline \end{array}$$

> 280
168
184

15)

$$\begin{array}{r} 102 \\ 124 \\ \hline \end{array}$$

> 219
295

For each incorrect answer, 15" is added to the time taken to solve problems

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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior



1)	$\frac{151}{141} > \frac{139}{146} > \frac{76}{88} > \frac{198}{253}$	1.071	0.952	0.864	0.783
----	---	-------	-------	-------	-------

2)	$\frac{284}{120} > \frac{246}{115} > \frac{335}{170} > \frac{238}{129}$	2.367	2.139	1.971	1.845
----	---	-------	-------	-------	-------

3)	$\frac{267}{116} > \frac{260}{125} > \frac{305}{162} > \frac{304}{177}$	2.302	2.080	1.883	1.718
----	---	-------	-------	-------	-------

4)	$\frac{490}{404} > \frac{871}{754} > \frac{434}{405} > \frac{914}{945}$	1.213	1.155	1.072	0.967
----	---	-------	-------	-------	-------

5)	$\frac{150}{431} > \frac{271}{894} > \frac{251}{869} > \frac{231}{913}$	0.348	0.303	0.289	0.253
----	---	-------	-------	-------	-------

6)	$\frac{75}{94} > \frac{0.798}{0.798}$	90.67%	->	$\frac{143}{183}$
7)	$\frac{223}{224} < \frac{0.996}{0.996}$	94.68%	->	$\frac{0.781}{0.781}$
8)	$\frac{155}{152} < \frac{1.020}{1.020}$	15.54%	<-	$\frac{193}{216}$
9)	$\frac{251}{164} < \frac{1.530}{1.530}$	3.70%	<-	$\frac{0.894}{0.894}$
10)	$\frac{214}{271} < \frac{0.790}{0.790}$	103.95%	<-	$\frac{76}{69}$
11)	$\frac{87}{147} < \frac{0.592}{0.592}$	12.56%	<-	$\frac{223}{161}$
12)	$\frac{163}{248} < \frac{0.657}{0.657}$	36.31%	<-	$\frac{157}{175}$
13)	$\frac{134}{100} < \frac{1.340}{1.340}$	54.86%	<-	$\frac{127}{220}$
14)	$\frac{332}{199} < \frac{1.668}{1.668}$	45.98%	<-	$\frac{88}{131}$
15)	$\frac{102}{124} < \frac{0.823}{0.823}$	85.23%	<-	$\frac{244}{198}$
		82.09%	<-	$\frac{1.232}{1.232}$
		18.57%	<-	$\frac{280}{168}$
		18.45%	<-	$\frac{1.667}{1.667}$
		114.71%	<-	$\frac{219}{295}$
		137.90%	<-	$\frac{0.742}{0.742}$

4, 16

1)

$$\begin{array}{r} 162 \\ 321 \\ \hline 143 \\ 257 \\ \hline 75 \\ 118 \\ \hline 227 \\ 331 \\ \hline \end{array}$$

$$\underline{4} > \underline{?} > \underline{2} > \underline{1}$$

2)

$$\begin{array}{r} 279 \\ 254 \\ \hline 325 \\ 272 \\ \hline 177 \\ 204 \\ \hline 296 \\ 311 \\ \hline \end{array}$$

$$\underline{2} > \underline{1} > \underline{4} > \underline{3}$$

3)

$$\begin{array}{r} 336 \\ 231 \\ \hline 260 \\ 200 \\ \hline 140 \\ 117 \\ \hline 234 \\ 217 \\ \hline \end{array}$$

$$\frac{286}{234}$$

$$\underline{1} > \underline{2} > \underline{3} > \underline{4}$$

4)

$$\begin{array}{r} 533 \\ 778 \\ \hline 468 \\ 555 \\ \hline 529 \\ 832 \\ \hline 428 \\ 557 \\ \hline \end{array}$$

$$\underline{3} > \underline{1} > \underline{4} > \underline{2}$$

5)

$$\begin{array}{r} 424 \\ 539 \\ \hline 412 \\ 571 \\ \hline 449 \\ 684 \\ \hline 554 \\ 637 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{4} > \underline{1}$$

6)

$$\begin{array}{r} 130 \\ 332 \\ \hline 48 \\ 116 \\ \hline 144 \\ 48 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 279 \\ 314 \\ \hline 234 \\ 240 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 124 \\ 110 \\ \hline 272 \\ 265 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 200 \\ 300 \\ \hline 113 \\ 175 \\ \hline 58 \\ 116 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 127 \\ 290 \\ \hline 160 \\ 321 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 158 \\ 104 \\ \hline 168 \\ 117 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 333 \\ 187 \\ \hline 170 \\ 102 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 142 \\ 126 \\ \hline 13 \\ 11 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 240 \\ 224 \\ \hline 287 \\ 237 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 190 \\ 173 \\ \hline 294 \\ 235 \\ \hline \end{array}$$

For each incorrect answer, 15" is added to the time taken to solve problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior

1)	$\frac{227}{331} > \frac{75}{118} > \frac{143}{257} > \frac{162}{321}$
	0.686 0.636 0.556 0.505

2)	$\frac{325}{272} > \frac{279}{254} > \frac{296}{311} > \frac{177}{204}$
	1.195 1.098 0.952 0.868

3)	$\frac{336}{231} > \frac{26}{20} > \frac{140}{117} > \frac{234}{217}$
	1.455 1.300 1.197 1.078

4)	$\frac{468}{555} > \frac{428}{557} > \frac{533}{778} > \frac{529}{832}$
	0.843 0.768 0.685 0.636

5)	$\frac{554}{637} > \frac{424}{539} > \frac{412}{571} > \frac{449}{684}$
	0.870 0.787 0.722 0.656

6)	$\frac{130}{332}$	170.83% <- <- 48 116 0.414
	0.392	186.21%
7)	$\frac{279}{314}$	19.23% <- <- 234 240 0.975
	0.889	30.83%
8)	$\frac{124}{110}$	119.35% -> -> 272 265 1.026
	1.127	140.91%
9)	$\frac{200}{300}$	76.99% <- <- 113 175 0.646
	0.667	71.43%
10)	$\frac{127}{290}$	25.98% -> -> 160 321 0.498
	0.438	10.69%
11)	$\frac{158}{104}$	6.33% -> -> 168 117 1.436
	1.519	12.50%
12)	$\frac{333}{187}$	95.88% <- <- 170 102 1.667
	1.781	83.33%
13)	$\frac{142}{126}$	992.31% <- <- 13 11 1.182
	1.127	#####
14)	$\frac{240}{224}$	19.58% -> -> 287 237 1.211
	1.071	5.80%
15)	$\frac{190}{173}$	54.74% -> -> 294 235 1.251
	1.098	35.84%

매일 매일 하나씩, 자료해석 비타민!!!

4:15

1)

$$\begin{array}{r} 179 \\ 156 \\ \hline 229 \\ 145 \\ \hline 222 \\ 162 \\ \hline 227 \\ 188 \\ \hline \end{array}$$

4 > 1 > 2 > 3

2)

$$\begin{array}{r} 340 \\ 336 \\ \hline 196 \\ 221 \\ \hline 226 \\ 285 \\ \hline 282 \\ 242 \\ \hline \end{array}$$

2 > 3 > 4 > 1

3)

$$\begin{array}{r} 123 \\ 73 \\ \hline 237 \\ 180 \\ \hline 271 \\ 219 \\ \hline 106 \\ 71 \\ \hline \end{array}$$

— > — > — > —

4)

$$\begin{array}{r} 887 \\ 846 \\ \hline 835 \\ 718 \\ \hline 215 \\ 258 \\ \hline 754 \\ 796 \\ \hline \end{array}$$

2 > 1 > 4 > 3

5)

$$\begin{array}{r} 231 \\ 304 \\ \hline 584 \\ 658 \\ \hline 359 \\ 435 \\ \hline 879 \\ 929 \\ \hline \end{array}$$

4 > 2 > 7 > 1

6)

$$\begin{array}{r} 307 \\ 273 \\ \hline \end{array}$$

< > 305
266

7)

$$\begin{array}{r} 187 \\ 196 \\ \hline \end{array}$$

< > 267
269

8)

$$\begin{array}{r} 156 \\ 206 \\ \hline \end{array}$$

< > 156
185

9)

$$\begin{array}{r} 121 \\ 173 \\ \hline \end{array}$$

< > 170
232

10)

$$\begin{array}{r} 67 \\ 226 \\ \hline \end{array}$$

> > 88
327

11)

$$\begin{array}{r} 21 \\ 55 \\ \hline \end{array}$$

> > 110
321

12)

$$\begin{array}{r} 251 \\ 291 \\ \hline \end{array}$$

< > 200
233
50~ 250
251. 2

13)

$$\begin{array}{r} 33 \\ 53 \\ \hline \end{array}$$

< > 99
151

14)

$$\begin{array}{r} 264 \\ 339 \\ \hline \end{array}$$

> > 138
179

15)

$$\begin{array}{r} 170 \\ 55 \\ \hline \end{array}$$

> > 103
34
171
51 153

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)			
$\frac{229}{145} > \frac{222}{162} > \frac{227}{188} > \frac{179}{156}$			
1.579	1.370	1.207	1.147

2)			
$\frac{282}{242} > \frac{340}{336} > \frac{196}{221} > \frac{226}{285}$			
1.165	1.012	0.887	0.793

3)			
$\frac{123}{73} > \frac{106}{71} > \frac{237}{180} > \frac{271}{219}$			
1.685	1.493	1.317	1.237

4)			
$\frac{835}{718} > \frac{887}{846} > \frac{754}{796} > \frac{215}{258}$			
1.163	1.048	0.947	0.833

5)			
$\frac{879}{929} > \frac{584}{658} > \frac{359}{435} > \frac{231}{304}$			
0.946	0.888	0.825	0.760

6)	$\frac{307}{273}$	0.66%	305
	1.125	<-	266
		2.63%	1.147
7)	$\frac{187}{196}$	42.78%	267
	0.954	->	269
		37.24%	0.993
8)	$\frac{156}{206}$	0.00%	156
	0.757	->	185
		11.35%	0.843
9)	$\frac{121}{173}$	40.50%	170
	0.699	->	232
		34.10%	0.733
10)	$\frac{67}{226}$	31.34%	88
	0.296	->	327
		44.69%	0.269
11)	$\frac{21}{55}$	423.81%	110
	0.382	->	321
		483.64%	0.343
12)	$\frac{251}{291}$	25.50%	200
	0.863	->	233
		24.89%	0.858
13)	$\frac{33}{53}$	200.00%	99
	0.623	->	151
		184.91%	0.656
14)	$\frac{264}{339}$	91.30%	138
	0.779	->	179
		89.39%	0.771
15)	$\frac{170}{55}$	65.05%	103
	3.091	->	34
		61.76%	3.029

1)

$$\begin{array}{r} 341 \\ 215 \\ \hline 332 \\ 245 \\ \hline 275 \\ 186 \\ \hline 184 \\ 148 \\ \hline \end{array}$$

$$\underline{1} > \underline{3} > \underline{2} > \underline{4}$$

2)

$$\begin{array}{r} 89 \\ 104 \\ \hline 106 \\ 102 \\ \hline 336 \\ 283 \\ \hline 219 \\ 225 \\ \hline \end{array}$$

$$\underline{4} > \underline{2} > \underline{/} > \underline{3}$$

3)

$$\begin{array}{r} 317 \\ 325 \\ \hline 220 \\ 258 \\ \hline 199 \\ 192 \\ \hline 165 \\ 205 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{/} > \underline{4}$$

4)

$$\begin{array}{r} 43 \\ 52 \\ \hline 569 \\ 790 \\ \hline 443 \\ 476 \\ \hline 614 \\ 911 \\ \hline \end{array}$$

$$\underline{2} > \underline{3} > \underline{/} > \underline{4}$$

5)

$$\begin{array}{r} 897 \\ 932 \\ \hline 971 \\ 857 \\ \hline 880 \\ 710 \\ \hline 717 \\ 661 \\ \hline \end{array}$$

$$\underline{4} > \underline{2} > \underline{/} > \underline{3}$$

43

$$\begin{array}{r} 130 \\ 49 \\ \hline \cancel{130} \\ \cancel{49} \\ \hline 161 \\ 62 \\ \hline \end{array}$$

$$\begin{array}{r} 177 \\ 56 \\ \hline \boxed{>} \\ 114 \\ 39 \\ \hline \end{array}$$

$$\begin{array}{r} 330 \\ 254 \\ \hline \boxed{<} \\ 300 \\ 221 \\ \hline \end{array}$$

$$\begin{array}{r} 115 \\ 122 \\ \hline \boxed{>} \\ 194 \\ 209 \\ \hline \end{array}$$

$$\begin{array}{r} 153 \\ 203 \\ \hline \boxed{<} \\ 205 \\ 253 \\ \hline \end{array}$$

$$\begin{array}{r} 237 \\ 186 \\ \hline \boxed{>} \\ 299 \\ 251 \\ \hline \end{array}$$

$$\begin{array}{r} 155 \\ \cancel{27} \cancel{86} \\ \cancel{17} \cancel{86} \\ \hline \boxed{<} \\ 298 \\ 158 \\ \hline \end{array}$$

$$\begin{array}{r} 288 \\ 131 \\ \hline \boxed{<} \\ 254 \\ 104 \\ \hline \end{array}$$

$$\begin{array}{r} 305 \\ 206 \\ \hline \boxed{<} \\ 233 \\ 139 \\ \hline \end{array} \quad \begin{array}{l} 466 \\ 417 \end{array}$$

$$\begin{array}{r} 142 \\ 333 \\ \hline \boxed{>} \\ 103 \\ 273 \\ \hline \end{array}$$

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15" is added
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1)	$\frac{341}{215} > \frac{275}{186} > \frac{332}{245} > \frac{184}{148}$
	1.586 1.478 1.355 1.243

2)	$\frac{336}{283} > \frac{106}{102} > \frac{219}{225} > \frac{89}{104}$
	1.187 1.039 0.973 0.856

3)	$\frac{199}{192} > \frac{317}{325} > \frac{220}{258} > \frac{165}{205}$
	1.036 0.975 0.853 0.805

4)	$\frac{443}{476} > \frac{43}{52} > \frac{569}{790} > \frac{614}{911}$
	0.931 0.827 0.720 0.674

5)	$\frac{880}{710} > \frac{971}{857} > \frac{717}{661} > \frac{897}{932}$
	1.239 1.133 1.085 0.962

6)	$\frac{130}{49} > \frac{2.653}{2.653}$
	23.85% -> 161 62
7)	$\frac{177}{56} < \frac{3.161}{3.161}$
	26.53% -> 114 39
8)	$\frac{330}{254} < \frac{1.299}{1.299}$
	55.26% -< 300 221
9)	$\frac{115}{122} > \frac{0.943}{0.943}$
	10.00% -< 300 221
10)	$\frac{153}{203} > \frac{0.754}{0.754}$
	14.93% -< 300 221
11)	$\frac{237}{186} > \frac{1.274}{1.274}$
	68.70% -> 194 209
12)	$\frac{155}{86} > \frac{1.802}{1.802}$
	71.31% -> 194 209
13)	$\frac{288}{131} < \frac{2.198}{2.198}$
	33.99% -> 205 253
14)	$\frac{305}{206} < \frac{1.481}{1.481}$
	24.63% -> 205 253
15)	$\frac{142}{333} < \frac{0.426}{0.426}$
	26.16% -> 205 253
	92.26% -> 299 251
	13.39% -> 298 158
	83.72% -> 298 158
	25.96% -< 254 104
	30.90% -< 254 104
	48.20% -< 233 139
	37.86% -< 233 139
	21.98% -< 103 273



1)

138	202	260	284
133	145	227	215

4 > 1 > 3 > 2

6)

152	<	43	172
203		54	26

2)

71	171	121	229
71	213	111	254

2 > 4 > 1 > 3

8)

310	<	214	209
340		340	340

3)

339	254	340	275
244	198	310	230

1 > 2 > 4 > 3

10)

61	<	221	319
101		101	101

4)

187	137	851	406
115	92	600	301

1 > 4 > 2 > 3

11)

219	<	66	108
251		70	240

5)

663	740	826	643
455	347	433	386

4 > 1 > 2 > 3

12)

150	<	168	341
338		338	338

13)

36	<	255	152
23		23	152

14)

283	>	120	62
132		132	62

15)

133	>	200	137
80		80	137

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1)

$$\frac{202}{145} > \frac{284}{215} > \frac{260}{227} > \frac{138}{133}$$

1.393

1.321

1.145

1.038

2)

$$\frac{121}{111} > \frac{71}{71} > \frac{229}{254} > \frac{171}{213}$$

1.090

1.000

0.902

0.803

3)

$$\frac{339}{244} > \frac{254}{198} > \frac{275}{230} > \frac{340}{310}$$

1.389

1.283

1.196

1.097

4)

$$\frac{187}{115} > \frac{137}{92} > \frac{851}{600} > \frac{406}{301}$$

1.626

1.489

1.418

1.349

5)

$$\frac{740}{347} > \frac{826}{433} > \frac{643}{386} > \frac{663}{455}$$

2.133

1.908

1.666

1.457

6)

152

203

0.749

7)

268

196

1.367

8)

310

340

0.912

9)

156

219

0.712

10)

61

101

0.604

11)

219

251

0.873

12)

150

338

0.444

13)

36

23

1.565

14)

283

132

2.144

15)

133

80

1.663

253.49%

<-

275.93%

7.46%

->

18.37%

44.86%

<-

62.68%

60.26%

->

54.34%

262.30%

->

215.84%

231.82%

<-

258.57%

12.00%

->

0.89%

608.33%

>-

560.87%

135.83%

>-

112.90%

50.38%

->

71.25%

200

137

1.460

43

54

0.796

1.241

214

209

1.024

250

338

0.740

221

319

0.693

66

70

0.943

168

341

0.493

255

152

1.678

120

62

1.935

200

137

1.460

1)

206	110	245	264
122	83	162	214
<u>1</u>	<u>3</u>	<u>2</u>	<u>4</u>
>	>	>	>

6)

278	>	287
306		325

2)

186	227	281	115
160	207	327	121
<u>1</u>	<u>2</u>	<u>4</u>	<u>3</u>
>	>	>	>

8)

169	>	333
73		151

3)

232	148	113	194
326	188	177	332
<u>2</u>	<u>1</u>	<u>3</u>	<u>4</u>
>	>	>	>

10)

88	>	116
245		323

4)

799	476	947	361
914	515	917	436
<u>3</u>	<u>2</u>	<u>1</u>	<u>4</u>
>	>	>	>

11)

26	>	29
62		78

5)

625	328	473	857
705	321	555	725
<u>3</u>	<u>2</u>	<u>4</u>	<u>1</u>
>	>	>	>

13)

132	>	238
103		199

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1)	$\frac{206}{122} > \frac{245}{162} > \frac{110}{83} > \frac{264}{214}$	1.689	1.512	1.325	1.234
----	--	-------	-------	-------	-------

2)	$\frac{186}{160} > \frac{227}{207} > \frac{115}{121} > \frac{281}{327}$	1.163	1.097	0.950	0.859
----	---	-------	-------	-------	-------

3)	$\frac{148}{188} > \frac{232}{326} > \frac{113}{177} > \frac{194}{332}$	0.787	0.712	0.638	0.584
----	---	-------	-------	-------	-------

4)	$\frac{947}{917} > \frac{476}{515} > \frac{799}{914} > \frac{361}{436}$	1.033	0.924	0.874	0.828
----	---	-------	-------	-------	-------

5)	$\frac{857}{725} > \frac{328}{321} > \frac{625}{705} > \frac{473}{555}$	1.182	1.022	0.887	0.852
----	---	-------	-------	-------	-------

6)	$\frac{278}{306} > \frac{287}{325}$	0.908	3.24%	->	287
		0.908	6.21%	->	325
7)	$\frac{159}{225} < \frac{95}{124}$	0.707	67.37%	<-	95
		0.707	81.45%	<-	124
8)	$\frac{169}{73} > \frac{333}{151}$	2.315	97.04%	->	333
		2.315	106.85%	->	151
9)	$\frac{98}{148} > \frac{192}{322}$	0.662	95.92%	->	192
		0.662	117.57%	->	322
10)	$\frac{88}{245} > \frac{116}{323}$	0.359	31.82%	->	116
		0.359	31.84%	->	323
11)	$\frac{26}{62} > \frac{29}{78}$	0.419	11.54%	->	29
		0.419	25.81%	->	78
12)	$\frac{221}{222} > \frac{309}{286}$	0.995	39.82%	->	309
		0.995	28.83%	->	286
13)	$\frac{132}{103} > \frac{238}{199}$	1.282	80.30%	->	238
		1.282	93.20%	->	199
14)	$\frac{131}{184} > \frac{177}{257}$	0.712	35.11%	->	177
		0.712	39.67%	->	257
15)	$\frac{255}{211} > \frac{322}{230}$	1.209	26.27%	->	322
		1.209	9.00%	->	230

3:31

1)

$$\begin{array}{r} 227 \\ 200 \\ \hline 253 \end{array} \quad \begin{array}{r} 200 \\ 170 \\ \hline 172 \end{array} \quad \begin{array}{r} 170 \\ 299 \\ \hline 327 \end{array}$$

1 > 4 > 2 > 3

6) $\frac{236}{69} < \frac{335}{89}$

7) $\frac{204}{301} > \frac{67}{109} \approx 0.61$

2)

$$\begin{array}{r} 190 \\ 125 \\ \hline 77 \end{array} \quad \begin{array}{r} 148 \\ 114 \\ \hline 114 \end{array} \quad \begin{array}{r} 192 \\ 153 \\ \hline 153 \end{array}$$

4 > 1 > 3 > 2

8) $\frac{155}{247} > \frac{175}{287}$

9) $\frac{119}{338} < \frac{30}{82}$

3)

$$\begin{array}{r} 100 \\ 118 \\ \hline 166 \end{array} \quad \begin{array}{r} 171 \\ 299 \\ \hline 278 \end{array} \quad \begin{array}{r} 278 \\ 227 \\ \hline 287 \end{array}$$

3 > 1 > 2 > 4

10) $\frac{130}{117} > \frac{169}{157}$

11) $\frac{58}{257} < \frac{67}{258}$

4)

$$\begin{array}{r} 222 \\ 164 \\ \hline 356 \end{array} \quad \begin{array}{r} 516 \\ 479 \\ \hline 804 \end{array} \quad \begin{array}{r} 804 \\ 435 \\ \hline 566 \end{array}$$

3 > 8 > 1 > 2 > 4

12) $\frac{65}{305} > \frac{50}{265}$

5)

$$\begin{array}{r} 833 \\ 862 \\ \hline 702 \end{array} \quad \begin{array}{r} 731 \\ 639 \\ \hline 754 \end{array} \quad \begin{array}{r} 754 \\ 53 \\ \hline 59 \end{array}$$

4 > 3 > 1 > 2

13) $\frac{233}{213} < \frac{168}{135}$

14) $\frac{186}{303} > \frac{141}{235}$

15) $\frac{314}{265} > \frac{205}{188}$

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~4'00"	: Superior

1)			
$\frac{227}{200} > \frac{170}{172} > \frac{299}{327} > \frac{200}{253}$			
1.135	0.988	0.914	0.791

2)			
$\frac{148}{77} > \frac{277}{153} > \frac{192}{114} > \frac{190}{125}$			
1.922	1.810	1.684	1.520

3)			
$\frac{171}{166} > \frac{278}{299} > \frac{100}{118} > \frac{227}{287}$			
1.030	0.930	0.847	0.791

4)			
$\frac{804}{479} > \frac{516}{356} > \frac{222}{164} > \frac{566}{435}$			
1.678	1.449	1.354	1.301

5)			
$\frac{754}{639} > \frac{59}{53} > \frac{731}{702} > \frac{833}{862}$			
1.180	1.113	1.041	0.966

6)	$\frac{236}{69}$	41.95% -> ->	335 89 3.764
	3.420	28.99%	
7)	$\frac{204}{301}$	204.48% <- <-	67 109 0.615
	0.678	176.15%	
8)	$\frac{155}{247}$	12.90% -> ->	175 287 0.610
	0.628	16.19%	
9)	$\frac{119}{338}$	296.67% <- <-	30 82 0.366
	0.352	312.20%	
10)	$\frac{130}{117}$	30.00% -> ->	169 157 1.076
	1.111	34.19%	
11)	$\frac{58}{257}$	15.52% -> ->	67 258 0.260
	0.226	0.39%	
12)	$\frac{65}{305}$	30.00% <- <-	50 265 0.189
	0.213	15.09%	
13)	$\frac{233}{213}$	38.69% <- <-	168 135 1.244
	1.094	57.78%	
14)	$\frac{186}{303}$	31.91% <- <-	141 235 0.600
	0.614	28.94%	
15)	$\frac{314}{265}$	53.17% <- <-	205 188 1.090
	1.185	40.96%	

1)

73	69	258	171
119	101	338	265
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

6)

247		255
275		299
<hr/> <hr/>		

2)

85	66	47	110
206	134	104	202
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

8)

153		179
234		290
<hr/> <hr/>		

3)

168	205	217	282
198	203	291	319
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

10)

120		224
165		311
<hr/> <hr/>		

4)

289	789	849	538
245	826	807	490
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

11)

250		317
190		270
<hr/> <hr/>		

5)

984	495	649	955
655	393	461	610
<hr/> <hr/> <hr/> <hr/>			
_____ > _____ > _____ > _____			

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1)						
258	>	69	>	171	>	73
338		101		265		119
0.763		0.683		0.645		0.613

2)						
110	>	66	>	47	>	85
202		134		104		206
0.545		0.493		0.452		0.413

3)						
205	>	282	>	168	>	217
203		319		198		291
1.010		0.884		0.848		0.746

4)						
289	>	538	>	849	>	789
245		490		807		826
1.180		1.098		1.052		0.955

5)						
955	>	984	>	649	>	495
610		655		461		393
1.566		1.502		1.408		1.260

6)	247	3.24%	255
	275	->	299
	0.898	8.73%	0.853
7)	267	38.34%	193
	254	<-	189
	1.051	34.39%	1.021
8)	153	16.99%	179
	234	->	290
	0.654	23.93%	0.617
9)	168	71.43%	98
	239	<-	152
	0.703	57.24%	0.645
10)	120	86.67%	224
	165	->	311
	0.727	88.48%	0.720
11)	250	26.80%	317
	190	->	270
	1.316	42.11%	1.174
12)	245	18.93%	206
	342	<-	323
	0.716	5.88%	0.638
13)	241	37.76%	332
	229	->	333
	1.052	45.41%	0.997
14)	73	121.92%	162
	66	->	157
	1.106	137.88%	1.032
15)	136	106.06%	66
	306	<-	149
	0.444	105.37%	0.443

1)

318	154	259	279
251	153	277	252
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____ > _____ > _____ > _____			

6)

166		279
164		278
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

2)

318	301	213	235
226	164	132	157
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____ > _____ > _____ > _____			

8)

333		81
84		22
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

3)

218	142	315	136
244	170	334	136
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____ > _____ > _____ > _____			

10)

263		139
194		99
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

4)

351	209	215	434
579	316	291	812
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____ > _____ > _____ > _____			

12)

82		334
59		231
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

5)

836	436	691	519
639	391	718	415
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____ > _____ > _____ > _____			

13)

225		205
254		251
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

14)

49		100
119		266
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

15)

148		212
216		299
<hr style="border: none; border-top: 1px solid black; margin-bottom: 5px;"/> _____		

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~4'00" : Superior	

1)						
318	>	279	>	154	>	259
251		252		153		277
1.267		1.107		1.007		0.935

2)						
301	>	213	>	235	>	318
164		132		157		226
1.835		1.614		1.497		1.407

3)						
136	>	315	>	218	>	142
136		334		244		170
1.000		0.943		0.893		0.835

4)						
215	>	209	>	351	>	434
291		316		579		812
0.739		0.661		0.606		0.534

5)						
836	>	519	>	436	>	691
639		415		391		718
1.308		1.251		1.115		0.962

6)	166	68.07%	279
	164	->	278
	1.012	69.51%	1.004
7)	81	186.42%	232
	105	->	261
	0.771	148.57%	0.889
8)	333	311.11%	81
	84	<-	22
	3.964	281.82%	3.682
9)	145	150.00%	58
	301	<-	121
	0.482	148.76%	0.479
10)	263	89.21%	139
	194	<-	99
	1.356	95.96%	1.404
11)	57	189.47%	165
	124	->	329
	0.460	165.32%	0.502
12)	82	307.32%	334
	59	->	231
	1.390	291.53%	1.446
13)	225	9.76%	205
	254	<-	251
	0.886	1.20%	0.817
14)	49	104.08%	100
	119	->	266
	0.412	123.53%	0.376
15)	148	43.24%	212
	216	->	299
	0.685	38.43%	0.709

3:26

26

1)

$\frac{150}{116}$	$\frac{108}{107}$	$\frac{247}{226}$	$\frac{319}{264}$
1	4	3	2
$1 > 4 > 3 > 2$			

2)

$\frac{236}{263}$	$\frac{110}{103}$	$\frac{256}{211}$	$\frac{329}{341}$
4	2	/	3
$4 > 2 > / > 3$			

3)

$\frac{54}{46}$	$\frac{57}{43}$	$\frac{89}{82}$	$\frac{270}{183}$
3	2	4	1
$3 > 2 > 4 > 1$			

4)

$\frac{929}{403}$	$\frac{768}{280}$	$\frac{104}{42}$	$\frac{696}{240}$
4	2	3	/
$4 > 2 > 3 > /$			

5)

$\frac{913}{959}$	$\frac{540}{598}$	$\frac{243}{307}$	$\frac{835}{991}$
1	2	4	3
$1 > 2 > 4 > 3$			

6)

$\frac{216}{312}$	>	$\frac{105}{161}$
-------------------	---	-------------------

7)

$\frac{29}{31}$	>	$\frac{138}{153}$
-----------------	---	-------------------

8)

$\frac{118}{314}$	<	$\frac{253}{335}$
-------------------	---	-------------------

9)

$\frac{274}{216}$	<	$\frac{322}{224}$
-------------------	---	-------------------

10)

$\frac{145}{78}$	<	$\frac{316}{165}$
------------------	---	-------------------

11)

$\frac{126}{92}$	>	$\frac{151}{117}$
------------------	---	-------------------

12)

$\frac{134}{149}$	<	$\frac{238}{246}$
-------------------	---	-------------------

13)

$\frac{68}{149}$	<	$\frac{169}{330}$
------------------	---	-------------------

14)

$\frac{58}{39}$	>	$\frac{248}{180}$
-----------------	---	-------------------

15)

$\frac{182}{220}$	<	$\frac{52}{64}$
-------------------	---	-----------------

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~ : Need Work

5'30"~6'00" : Acceptable

5'00"~5'30" : Average

4'30"~5'00" : good

4'00"~4'30" : Excellent

~4'00" : Superior



1)

$$\frac{150}{116} > \frac{319}{264} > \frac{247}{226} > \frac{108}{107}$$

1.293	1.208	1.093	1.009
-------	-------	-------	-------

2)

$$\frac{256}{211} > \frac{110}{103} > \frac{329}{341} > \frac{236}{263}$$

1.213	1.068	0.965	0.897
-------	-------	-------	-------

3)

$$\frac{270}{183} > \frac{57}{43} > \frac{54}{46} > \frac{89}{82}$$

1.475	1.326	1.174	1.085
-------	-------	-------	-------

4)

$$\frac{696}{240} > \frac{768}{280} > \frac{104}{42} > \frac{929}{403}$$

2.900	2.743	2.476	2.305
-------	-------	-------	-------

5)

$$\frac{913}{959} > \frac{540}{598} > \frac{835}{991} > \frac{243}{307}$$

0.952	0.903	0.843	0.792
-------	-------	-------	-------

6)	216 312 0.692	105.71% <- 93.79%	105 161 0.652
7)	29 31 0.935	375.86% -> -> 393.55%	138 153 0.902
8)	118 157 0.752	114.41% -> -> 113.38%	253 335 0.755
9)	274 216 1.269	17.52% -> -> 3.70%	322 224 1.438
10)	145 78 1.859	117.93% -> -> 111.54%	316 165 1.915
11)	126 92 1.370	19.84% -> -> 27.17%	151 117 1.291
12)	134 149 0.899	77.61% -> -> 65.10%	238 246 0.967
13)	68 149 0.456	148.53% -> -> 121.48%	169 330 0.512
14)	58 39 1.487	327.59% -> -> 361.54%	248 180 1.378
15)	182 220 0.827	250.00% -< -< 243.75%	52 64 0.813

1)

$$\begin{array}{r} 66 \\ \underline{- 96} \\ 150 \\ \underline{- 200} \\ 143 \\ \underline{- 175} \\ 62 \\ \underline{- 103} \end{array}$$

3 > 2 > 1 > 4

2)

$$\begin{array}{r} 185 \\ \underline{- 108} \\ 172 \\ \underline{- 124} \\ 235 \\ \underline{- 147} \\ 239 \\ \underline{- 127} \end{array}$$

2 > 4 > 3 > 1

3)

$$\begin{array}{r} 108 \\ \underline{- 170} \\ 158 \\ \underline{- 317} \\ 198 \\ \underline{- 292} \\ 33 \\ \underline{- 58} \end{array}$$

2 > 4 > 1 > 3

4)

$$\begin{array}{r} 884 \\ \underline{- 737} \\ 645 \\ \underline{- 484} \\ 485 \\ \underline{- 379} \\ 697 \\ \underline{- 667} \end{array}$$

3 > 1 > 2 > 4

5)

$$\begin{array}{r} 901 \\ \underline{- 424} \\ 882 \\ \underline{- 388} \\ 408 \\ \underline{- 215} \\ 883 \\ \underline{- 530} \end{array}$$

2 > 1 > 3 > 4

6)

$$\begin{array}{r} 189 \\ \underline{- 211} \\ > \\ 283 \\ \underline{- 329} \end{array}$$

7)

$$\begin{array}{r} 184 \\ \underline{- 142} \\ > \\ 156 \\ \underline{- 132} \end{array}$$

8)

$$\begin{array}{r} 263 \\ \underline{- 230} \\ > \\ 172 \\ \underline{- 163} \end{array}$$

9)

$$\begin{array}{r} 97 \\ \underline{- 86} \\ < \\ 278 \\ \underline{- 240} \end{array}$$

10)

$$\begin{array}{r} 185 \\ \underline{- 262} \\ > \\ 187 \\ \underline{- 288} \end{array}$$

11)

$$\begin{array}{r} 207 \\ \underline{- 327} \\ < \\ 88 \\ \underline{- 123} \end{array}$$

12)

$$\begin{array}{r} 99 \\ \underline{- 105} \\ > \\ 149 \\ \underline{- 177} \end{array}$$

13)

$$\begin{array}{r} 264 \\ \underline{- 208} \\ > \\ 132 \\ \underline{- 105} \end{array}$$

14)

$$\begin{array}{r} 127 \\ \underline{- 154} \\ > \\ 270 \\ \underline{- 339} \end{array}$$

15)

$$\begin{array}{r} 221 \\ \underline{- 120} \\ > \\ 295 \\ \underline{- 162} \end{array}$$

For each incorrect answer,
15" is added
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problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{143}{175} > \frac{150}{200} > \frac{66}{96} > \frac{62}{103}$	0.817	0.750	0.688	0.602
----	--	-------	-------	-------	-------

2)	$\frac{239}{127} > \frac{185}{108} > \frac{235}{147} > \frac{172}{124}$	1.882	1.713	1.599	1.387
----	---	-------	-------	-------	-------

3)	$\frac{198}{292} > \frac{108}{170} > \frac{33}{58} > \frac{158}{317}$	0.678	0.635	0.569	0.498
----	---	-------	-------	-------	-------

4)	$\frac{645}{484} > \frac{485}{379} > \frac{884}{737} > \frac{697}{667}$	1.333	1.280	1.199	1.045
----	---	-------	-------	-------	-------

5)	$\frac{882}{388} > \frac{901}{424} > \frac{408}{215} > \frac{883}{530}$	2.273	2.125	1.898	1.666
----	---	-------	-------	-------	-------

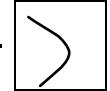
6)	$\frac{189}{211} > \frac{0.896}{0.860}$	49.74%	->	$\frac{283}{329}$
7)	$\frac{184}{142} < \frac{1.296}{1.182}$	55.92%	->	$\frac{156}{132}$
8)	$\frac{263}{230} < \frac{1.143}{1.055}$	17.95%	<-	$\frac{172}{163}$
9)	$\frac{97}{86} > \frac{1.128}{1.158}$	52.91%	<-	$\frac{278}{240}$
10)	$\frac{185}{262} > \frac{0.706}{0.649}$	41.10%	<-	$\frac{187}{288}$
11)	$\frac{207}{327} < \frac{0.633}{0.715}$	186.60%	<-	$\frac{88}{123}$
12)	$\frac{99}{105} > \frac{0.943}{0.842}$	135.23%	<-	$\frac{149}{177}$
13)	$\frac{264}{208} > \frac{1.269}{1.257}$	100.00%	<-	$\frac{132}{105}$
14)	$\frac{127}{154} > \frac{0.825}{0.796}$	98.10%	<-	$\frac{270}{339}$
15)	$\frac{221}{120} > \frac{1.842}{1.821}$	112.60%	<-	$\frac{295}{162}$

1)

$$\begin{array}{r} 103 \\ 135 \\ \hline 247 \\ 266 \\ \hline 202 \\ 234 \\ \hline 181 \\ 187 \\ \hline \end{array}$$

4 > 2 > 3 > 1

6)

$$\begin{array}{r} 315 \\ 266 \\ \hline \end{array}$$


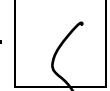
$$\begin{array}{r} 233 \\ 218 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 70 \\ 113 \\ \hline 261 \\ 296 \\ \hline 150 \\ 189 \\ \hline 170 \\ 242 \\ \hline \end{array}$$

4 > 1 > 2 > 3

8)

$$\begin{array}{r} 142 \\ 116 \\ \hline \end{array}$$


$$\begin{array}{r} 281 \\ 199 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 184 \\ 264 \\ \hline 241 \\ 309 \\ \hline 172 \\ 193 \\ \hline 194 \\ 313 \\ \hline \end{array}$$

3 > 2 > 1 > 4

10)

$$\begin{array}{r} 143 \\ 84 \\ \hline \end{array}$$

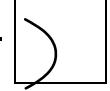

$$\begin{array}{r} 126 \\ 83 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 370 \\ 648 \\ \hline 365 \\ 490 \\ \hline 488 \\ 803 \\ \hline 604 \\ 879 \\ \hline \end{array}$$

4 > 1 > 3 > 2

11)

$$\begin{array}{r} 226 \\ 108 \\ \hline \end{array}$$


$$\begin{array}{r} 71 \\ 34 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 669 \\ 579 \\ \hline 560 \\ 437 \\ \hline 537 \\ 485 \\ \hline 577 \\ 432 \\ \hline \end{array}$$

3 > 2 > 4 > 1

13)

$$\begin{array}{r} 304 \\ 92 \\ \hline \end{array}$$


$$\begin{array}{r} 216 \\ 57 \\ \hline \end{array}$$

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problems

14)

$$\begin{array}{r} 63 \\ 143 \\ \hline \end{array}$$


$$\begin{array}{r} 164 \\ 325 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 173 \\ 205 \\ \hline \end{array}$$


$$\begin{array}{r} 214 \\ 221 \\ \hline \end{array}$$

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{181}{187} > \frac{247}{266} > \frac{202}{234} > \frac{103}{135}$
	0.968 0.929 0.863 0.763

2)	$\frac{261}{296} > \frac{150}{189} > \frac{170}{242} > \frac{70}{113}$
	0.882 0.794 0.702 0.619

3)	$\frac{172}{193} > \frac{241}{309} > \frac{184}{264} > \frac{194}{313}$
	0.891 0.780 0.697 0.620

4)	$\frac{365}{490} > \frac{604}{879} > \frac{488}{803} > \frac{370}{648}$
	0.745 0.687 0.608 0.571

5)	$\frac{577}{432} > \frac{560}{437} > \frac{669}{579} > \frac{537}{485}$
	1.336 1.281 1.155 1.107

6)	$\frac{315}{266} < \frac{233}{218}$
	1.184 22.02%
7)	$\frac{30}{29} > \frac{310}{305}$
	1.034 951.72%
8)	$\frac{142}{116} > \frac{281}{199}$
	1.224 71.55%
9)	$\frac{65}{224} < \frac{73}{224}$
	0.290 0.00%
10)	$\frac{143}{84} > \frac{126}{83}$
	1.702 1.20%
11)	$\frac{226}{108} > \frac{71}{34}$
	2.093 217.65%
12)	$\frac{275}{262} < \frac{118}{111}$
	1.050 136.04%
13)	$\frac{304}{92} < \frac{216}{57}$
	3.304 61.40%
14)	$\frac{63}{143} > \frac{164}{325}$
	0.441 127.27%
15)	$\frac{173}{205} > \frac{214}{221}$
	0.844 7.80%

1)

$$\begin{array}{r} 63 \\ 41 \\ \hline 251 \\ 170 \\ \hline 161 \\ 94 \\ \hline 144 \\ 88 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

2)

$$\begin{array}{r} 56 \\ 48 \\ \hline 110 \\ 117 \\ \hline 246 \\ 226 \\ \hline 84 \\ 93 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

3)

$$\begin{array}{r} 187 \\ 185 \\ \hline 153 \\ 169 \\ \hline 256 \\ 236 \\ \hline 298 \\ 254 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

4)

$$\begin{array}{r} 420 \\ 481 \\ \hline 293 \\ 315 \\ \hline 581 \\ 705 \\ \hline 719 \\ 944 \\ \hline \end{array}$$

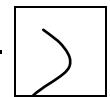
$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

5)

$$\begin{array}{r} 148 \\ 124 \\ \hline 927 \\ 719 \\ \hline 368 \\ 326 \\ \hline 953 \\ 971 \\ \hline \end{array}$$

$\overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad} > \overbrace{\quad\quad\quad}$

6)

$$\begin{array}{r} 95 \\ 288 \\ \hline \end{array}$$


$$\begin{array}{r} 83 \\ 254 \\ \hline \end{array}$$

7)

$$\begin{array}{r} 146 \\ 268 \\ \hline \end{array}$$

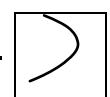

$$\begin{array}{r} 79 \\ 126 \\ \hline \end{array}$$

8)

$$\begin{array}{r} 130 \\ 163 \\ \hline \end{array}$$


$$\begin{array}{r} 273 \\ 332 \\ \hline \end{array}$$

9)

$$\begin{array}{r} 279 \\ 300 \\ \hline \end{array}$$


$$\begin{array}{r} 103 \\ 112 \\ \hline \end{array}$$

10)

$$\begin{array}{r} 303 \\ 285 \\ \hline \end{array}$$


$$\begin{array}{r} 149 \\ 138 \\ \hline \end{array}$$

11)

$$\begin{array}{r} 142 \\ 91 \\ \hline \end{array}$$


$$\begin{array}{r} 182 \\ 107 \\ \hline \end{array}$$

12)

$$\begin{array}{r} 71 \\ 168 \\ \hline \end{array}$$


$$\begin{array}{r} 111 \\ 254 \\ \hline \end{array}$$

13)

$$\begin{array}{r} 75 \\ 90 \\ \hline \end{array}$$


$$\begin{array}{r} 288 \\ 306 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 117 \\ 316 \\ \hline \end{array}$$


$$\begin{array}{r} 57 \\ 159 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 195 \\ 184 \\ \hline \end{array}$$


$$\begin{array}{r} 310 \\ 329 \\ \hline \end{array}$$

For each incorrect answer,
15" is added
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6'00"~	: Need Work
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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{161}{94} > \frac{144}{88} > \frac{63}{41} > \frac{251}{170}$	1.713	1.636	1.537	1.476
----	---	-------	-------	-------	-------

2)	$\frac{56}{48} > \frac{246}{226} > \frac{110}{117} > \frac{84}{93}$	1.167	1.088	0.940	0.903
----	---	-------	-------	-------	-------

3)	$\frac{298}{254} > \frac{256}{236} > \frac{187}{185} > \frac{153}{169}$	1.173	1.085	1.011	0.905
----	---	-------	-------	-------	-------

4)	$\frac{293}{315} > \frac{420}{481} > \frac{581}{705} > \frac{719}{944}$	0.930	0.873	0.824	0.762
----	---	-------	-------	-------	-------

5)	$\frac{927}{719} > \frac{148}{124} > \frac{368}{326} > \frac{953}{971}$	1.289	1.194	1.129	0.981
----	---	-------	-------	-------	-------

6)	$\frac{95}{288} < \frac{0.330}{0.327}$	14.46%	<-	$\frac{83}{254}$	0.327
7)	$\frac{146}{268} < \frac{0.545}{0.627}$	13.39%	<-	$\frac{79}{126}$	0.627
8)	$\frac{130}{163} > \frac{0.798}{0.822}$	84.81%	<-	$\frac{273}{332}$	0.822
9)	$\frac{279}{300} < \frac{0.930}{0.920}$	110.00%	>-	$\frac{103}{112}$	0.920
10)	$\frac{303}{285} < \frac{1.063}{1.080}$	103.68%	<-	$\frac{149}{138}$	1.080
11)	$\frac{142}{91} > \frac{1.560}{1.701}$	170.87%	>-	$\frac{182}{107}$	1.701
12)	$\frac{71}{168} > \frac{0.423}{0.437}$	103.36%	<-	$\frac{111}{254}$	0.437
13)	$\frac{75}{90} > \frac{0.833}{0.941}$	284.00%	>-	$\frac{288}{306}$	0.941
14)	$\frac{117}{316} < \frac{0.370}{0.358}$	105.26%	<-	$\frac{57}{159}$	0.358
15)	$\frac{195}{184} > \frac{1.060}{0.942}$	98.74%	>-	$\frac{310}{329}$	0.942

1)

$$\begin{array}{r} 92 \\ 109 \\ \hline 215 \\ 240 \\ \hline 30 \\ 40 \\ \hline 261 \\ 323 \\ \hline \end{array}$$

2 > 1 > 4 > 3

2)

$$\begin{array}{r} 267 \\ 281 \\ \hline 273 \\ 339 \\ \hline 238 \\ 229 \\ \hline 258 \\ 306 \\ \hline \end{array}$$

2 > 4 > 1 > 3

3)

$$\begin{array}{r} 174 \\ 175 \\ \hline 245 \\ 294 \\ \hline 268 \\ 291 \\ \hline 110 \\ 140 \\ \hline \end{array}$$

1 > 3 > 2 > 4

4)

$$\begin{array}{r} 256 \\ 240 \\ \hline 503 \\ 491 \\ \hline 852 \\ 708 \\ \hline 492 \\ 547 \\ \hline \end{array}$$

2 > 7 > 1 > 4

5)

$$\begin{array}{r} 592 \\ 920 \\ \hline 324 \\ 387 \\ \hline 111 \\ 150 \\ \hline 611 \\ 897 \\ \hline \end{array}$$

4 > 1 > 2 > 3

6)

$$\begin{array}{r} 119 \\ 223 \\ \hline \end{array}$$

138
223

7)

$$\begin{array}{r} 300 \\ 157 \\ \hline \end{array}$$

313
180

8)

$$\begin{array}{r} 234 \\ 70 \\ \hline \end{array}$$

265
86

9)

$$\begin{array}{r} 312 \\ 207 \\ \hline \end{array}$$

244
144

10)

$$\begin{array}{r} 306 \\ 198 \\ \hline \end{array}$$

181
101

11)

$$\begin{array}{r} 84 \\ 113 \\ \hline \end{array}$$

194
286

12)

$$\begin{array}{r} 203 \\ 221 \\ \hline \end{array}$$

223
226

13)

$$\begin{array}{r} 173 \\ 62 \\ \hline \end{array}$$

287
112

14)

$$\begin{array}{r} 270 \\ 188 \\ \hline \end{array}$$

67
45

15)

$$\begin{array}{r} 248 \\ 246 \\ \hline \end{array}$$

167
173

For each incorrect answer,
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taken to solve
problems

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5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)			
$\frac{215}{240} > \frac{92}{109} > \frac{261}{323} > \frac{30}{40}$			
0.896	0.844	0.808	0.750

2)			
$\frac{238}{229} > \frac{267}{281} > \frac{258}{306} > \frac{273}{339}$			
1.039	0.950	0.843	0.805

3)			
$\frac{174}{175} > \frac{268}{291} > \frac{245}{294} > \frac{110}{140}$			
0.994	0.921	0.833	0.786

4)			
$\frac{852}{708} > \frac{256}{240} > \frac{503}{491} > \frac{492}{547}$			
1.203	1.067	1.024	0.899

5)			
$\frac{324}{387} > \frac{111}{150} > \frac{611}{897} > \frac{592}{920}$			
0.837	0.740	0.681	0.643

6)	$\frac{119}{223}$	15.97%	138
	0.534	->	223
		0.00%	0.619
7)	$\frac{300}{157}$	4.33%	313
	1.911	->	180
		14.65%	1.739
8)	$\frac{234}{70}$	13.25%	265
	3.343	->	86
		22.86%	3.081
9)	$\frac{312}{207}$	27.87%	244
	1.507	<-	144
		43.75%	1.694
10)	$\frac{306}{198}$	69.06%	181
	1.545	<-	101
		96.04%	1.792
11)	$\frac{84}{113}$	130.95%	194
	0.743	->	286
		153.10%	0.678
12)	$\frac{203}{221}$	9.85%	223
	0.919	->	226
		2.26%	0.987
13)	$\frac{173}{62}$	65.90%	287
	2.790	->	112
		80.65%	2.563
14)	$\frac{270}{188}$	302.99%	67
	1.436	<-	45
		317.78%	1.489
15)	$\frac{248}{246}$	48.50%	167
	1.008	<-	173
		42.20%	0.965

1)

$$\begin{array}{r} 172 \\ 275 \\ \hline 245 \\ 309 \\ \hline 91 \\ 131 \\ \hline 256 \\ 293 \\ \hline \end{array}$$

4 > 2 > 3 > 1

6)

$$\begin{array}{r} 296 \\ 321 \\ \hline \end{array}$$

L 202
207

2)

$$\begin{array}{r} 231 \\ 180 \\ \hline 116 \\ 108 \\ \hline 292 \\ 238 \\ \hline 303 \\ 211 \\ \hline \end{array}$$

2 > 4 > 3 > 1

8)

$$\begin{array}{r} 303 \\ 329 \\ \hline \end{array}$$

D 259
291

3)

$$\begin{array}{r} 304 \\ 287 \\ \hline 197 \\ 199 \\ \hline 55 \\ 49 \\ \hline 283 \\ 241 \\ \hline \end{array}$$

Ø > 4 > 2 > Ø 1
3

11)

$$\begin{array}{r} 208 \\ 127 \\ \hline \end{array}$$

C 241
135

4)

$$\begin{array}{r} 440 \\ 704 \\ \hline 389 \\ 832 \\ \hline 204 \\ 418 \\ \hline 512 \\ 933 \\ \hline \end{array}$$

1 > 4 > 3 > 2

12)

$$\begin{array}{r} 305 \\ 294 \\ \hline \end{array}$$

D 119
115

5)

$$\begin{array}{r} 633 \\ 650 \\ \hline 956 \\ 885 \\ \hline 719 \\ 807 \\ \hline 478 \\ 609 \\ \hline \end{array}$$

2 > 1 > 3 > 4

13)

$$\begin{array}{r} 18 \\ 62 \\ \hline \end{array}$$

D 96
337

For each incorrect answer,
15" is added
to the time
taken to solve
problems

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)

$$\frac{256}{293} > \frac{245}{309} > \frac{91}{131} > \frac{172}{275}$$

0.874	0.793	0.695	0.625
-------	-------	-------	-------

2)

$$\frac{303}{211} > \frac{231}{180} > \frac{292}{238} > \frac{116}{108}$$

1.436	1.283	1.227	1.074
-------	-------	-------	-------

3)

$$\frac{283}{241} > \frac{55}{49} > \frac{304}{287} > \frac{197}{199}$$

1.174	1.122	1.059	0.990
-------	-------	-------	-------

4)

$$\frac{440}{704} > \frac{512}{933} > \frac{204}{418} > \frac{389}{832}$$

0.625	0.549	0.488	0.468
-------	-------	-------	-------

5)

$$\frac{956}{885} > \frac{633}{650} > \frac{719}{807} > \frac{478}{609}$$

1.080	0.974	0.891	0.785
-------	-------	-------	-------

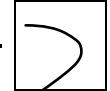
6)	<u>296</u>	46.53%	202
	<u>321</u>	<-	207
	0.922	55.07%	0.976
7)	<u>302</u>	34.82%	224
	<u>294</u>	<-	231
	1.027	27.27%	0.970
8)	<u>303</u>	16.99%	259
	<u>329</u>	<-	291
	0.921	13.06%	0.890
9)	<u>309</u>	36.73%	226
	<u>311</u>	<-	229
	0.994	35.81%	0.987
10)	<u>266</u>	1.92%	261
	<u>328</u>	<-	284
	0.811	15.49%	0.919
11)	<u>208</u>	15.87%	241
	<u>127</u>	->	135
	1.638	6.30%	1.785
12)	<u>305</u>	156.30%	119
	<u>294</u>	<-	115
	1.037	155.65%	1.035
13)	<u>18</u>	433.33%	337
	<u>62</u>	->	96
	0.290	443.55%	0.285
14)	<u>289</u>	93.96%	149
	<u>201</u>	<-	98
	1.438	105.10%	1.520
15)	<u>56</u>	12.00%	50
	<u>193</u>	<-	189
	0.290	2.12%	0.265

1)

$$\begin{array}{r} 214 \\ 201 \\ \hline 269 \\ 291 \\ \hline 274 \\ 324 \\ \hline 75 \\ 96 \\ \hline \end{array}$$

1 > 2 > 3 > 4

6)

$$\begin{array}{r} 125 \\ 212 \\ \hline \end{array}$$


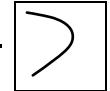
$$\begin{array}{r} 24 \\ 44 \\ \hline \end{array}$$

2)

$$\begin{array}{r} 341 \\ 226 \\ \hline 305 \\ 178 \\ \hline 293 \\ 225 \\ \hline 163 \\ 131 \\ \hline \end{array}$$

2 > 1 > 3 > 4

8)

$$\begin{array}{r} 166 \\ 299 \\ \hline \end{array}$$


$$\begin{array}{r} 138 \\ 250 \\ \hline \end{array}$$

3)

$$\begin{array}{r} 319 \\ 272 \\ \hline 229 \\ 224 \\ \hline 34 \\ 35 \\ \hline 304 \\ 326 \\ \hline \end{array}$$

1 > 2 > 3 > 4

9)

$$\begin{array}{r} 269 \\ 196 \\ \hline \end{array}$$

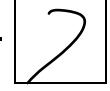

$$\begin{array}{r} 324 \\ 218 \\ \hline \end{array}$$

4)

$$\begin{array}{r} 986 \\ 925 \\ \hline 830 \\ 893 \\ \hline 567 \\ 413 \\ \hline 994 \\ 806 \\ \hline \end{array}$$

3 > 1 > 2 > 4

11)

$$\begin{array}{r} 290 \\ 250 \\ \hline \end{array}$$


$$\begin{array}{r} 146 \\ 142 \\ \hline \end{array}$$

5)

$$\begin{array}{r} 497 \\ 514 \\ \hline 774 \\ 977 \\ \hline 571 \\ 625 \\ \hline 674 \\ 815 \\ \hline \end{array}$$

1 > 4 > 2 > 3

12)

$$\begin{array}{r} 114 \\ 100 \\ \hline \end{array}$$


$$\begin{array}{r} 298 \\ 239 \\ \hline \end{array}$$

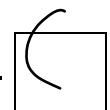
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13)

$$\begin{array}{r} 281 \\ 286 \\ \hline \end{array}$$

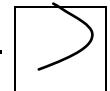

$$\begin{array}{r} 172 \\ 159 \\ \hline \end{array}$$

14)

$$\begin{array}{r} 229 \\ 218 \\ \hline \end{array}$$


$$\begin{array}{r} 299 \\ 262 \\ \hline \end{array}$$

15)

$$\begin{array}{r} 76 \\ 126 \\ \hline \end{array}$$


$$\begin{array}{r} 147 \\ 250 \\ \hline \end{array}$$

6'00"~	: Need Work
5'30"~6'00"	: Acceptable
5'00"~5'30"	: Average
4'30"~5'00"	: good
4'00"~4'30"	: Excellent
~4'00"	: Superior

1)	$\frac{214}{201} > \frac{269}{291} > \frac{274}{324} > \frac{75}{96}$
214	269
201	291
1.065	0.924
0.846	0.781

2)	$\frac{305}{178} > \frac{341}{226} > \frac{293}{225} > \frac{163}{131}$
305	341
178	226
1.713	1.509
1.302	1.244

3)	$\frac{319}{272} > \frac{229}{224} > \frac{34}{35} > \frac{304}{326}$
319	229
272	224
1.173	1.022
0.971	0.933

4)	$\frac{567}{413} > \frac{994}{806} > \frac{986}{925} > \frac{830}{893}$
567	994
413	806
1.373	1.233
1.066	0.929

5)	$\frac{497}{514} > \frac{571}{625} > \frac{674}{815} > \frac{774}{977}$
497	571
514	625
0.967	0.914
0.827	0.792

6)	$\frac{125}{212} > \frac{0.590}{0.545}$
125	212
0.590	0.545
420.83%	<-
24	44
420.83%	<-
7)	$\frac{165}{101} > \frac{1.634}{1.749}$
165	101
1.634	1.749
102.42%	->
334	191
102.42%	->
8)	$\frac{166}{299} > \frac{0.555}{0.552}$
166	299
0.555	0.552
20.29%	<-
138	250
20.29%	<-
9)	$\frac{269}{196} > \frac{1.372}{1.486}$
269	196
1.372	1.486
20.45%	->
324	218
20.45%	->
10)	$\frac{323}{250} > \frac{1.292}{1.399}$
323	250
1.292	1.399
22.81%	<-
263	188
22.81%	<-
11)	$\frac{290}{250} > \frac{1.160}{1.028}$
290	250
1.160	1.028
98.63%	<-
146	142
98.63%	<-
12)	$\frac{114}{100} > \frac{1.140}{1.247}$
114	100
1.140	1.247
161.40%	->
298	239
161.40%	->
13)	$\frac{281}{286} > \frac{0.983}{1.082}$
281	286
0.983	1.082
63.37%	<-
172	159
63.37%	<-
14)	$\frac{229}{218} > \frac{1.050}{1.141}$
229	218
1.050	1.141
30.57%	->
299	262
30.57%	->
15)	$\frac{76}{126} > \frac{0.603}{0.588}$
76	126
0.603	0.588
93.42%	->
147	250
93.42%	->

3:08

1)

148	191	247	249
147	246	224	283
2	4	1	3
—————>	—————>	—————>	—————>

6)

154	>	303
108	—————	230

2)

191	125	204	149
287	213	278	236
2	4	1	3
—————>	—————>	—————>	—————>

8)

163	<	162
257	—————	228

3)

299	218	104	182
331	258	144	240
1	2	4	3
—————>	—————>	—————>	—————>

9)

231	>	116
51	—————	26
$\frac{23}{52}$		

4)

621	833	482	254
565	656	581	268
2	1	4	3
—————>	—————>	—————>	—————>

11)

191	<	158
340	—————	253
$\frac{20}{241}$		

5)

358	583	403	301
505	714	526	487
3	1	2	4
—————>	—————>	—————>	—————>

12)

98	>	79
215	—————	191

13)

148	<	256
84	—————	138
64 $\frac{20}{241}$		

14)

44	<	181
72	—————	280

15)

246	<	164
299	—————	178

For each incorrect answer,
15" is added
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taken to solve
problems

6'00"~	: Need Work
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5'00"~5'30" : Average	
4'30"~5'00" : good	
4'00"~4'30" : Excellent	
~4'00" : Superior	

1)			
$\frac{247}{224} > \frac{148}{147} > \frac{249}{283} > \frac{191}{246}$			
1.103	1.007	0.880	0.776

2)			
$\frac{204}{278} > \frac{191}{287} > \frac{149}{236} > \frac{125}{213}$			
0.734	0.666	0.631	0.587

3)			
$\frac{299}{331} > \frac{218}{258} > \frac{182}{240} > \frac{104}{144}$			
0.903	0.845	0.758	0.722

4)			
$\frac{833}{656} > \frac{621}{565} > \frac{254}{268} > \frac{482}{581}$			
1.270	1.099	0.948	0.830

5)			
$\frac{583}{714} > \frac{403}{526} > \frac{358}{505} > \frac{301}{487}$			
0.817	0.766	0.709	0.618

6)	154	96.75%	303
	108	->	230
	1.426	112.96%	1.317
7)	273	22.42%	223
	179	<-	150
	1.525	19.33%	1.487
8)	163	0.62%	162
	257	<-	228
	0.634	12.72%	0.711
9)	231	99.14%	116
	51	<-	26
	4.529	96.15%	4.462
10)	158	44.94%	229
	142	->	193
	1.113	35.92%	1.187
11)	191	20.89%	158
	340	<-	253
	0.562	34.39%	0.625
12)	98	24.05%	79
	215	<-	191
	0.456	12.57%	0.414
13)	148	72.97%	256
	84	->	138
	1.762	64.29%	1.855
14)	44	311.36%	181
	72	->	280
	0.611	288.89%	0.646
15)	246	50.00%	164
	299	<-	178
	0.823	67.98%	0.921