

Commercial Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 20												PWI 30							
	9½"				11½"				14"				9½"				11½"			
	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL
	L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360	
6	-	-	-	299	-	-	-	303	-	-	-	303	-	-	-	254	-	-	-	254
7	-	-	-	256	-	-	-	260	-	-	-	260	-	-	-	218	-	-	-	218
8	202	-	-	224	-	-	-	228	-	-	-	228	-	-	-	191	-	-	-	191
9	148	185	-	199	-	-	-	202	-	-	-	202	162	-	-	169	-	-	-	169
10	111	139	-	179	-	-	-	182	-	-	-	182	122	-	-	152	-	-	-	152
11	86	107	143	163	143	-	-	165	-	-	-	165	94	118	-	139	-	-	-	139
12	67	84	112	140	113	141	-	152	-	-	-	152	74	92	123	127	123	-	-	127
13	54	67	89	119	91	113	-	140	130	-	-	140	59	74	98	117	99	-	-	117
14	43	54	72	103	74	92	123	130	106	-	-	130	48	60	80	109	81	101	-	109
15	36	45	60	89	61	76	101	116	88	109	-	121	39	49	66	98	67	83	-	102
16	30	37	49	74	51	63	84	102	73	91	-	114	33	41	55	82	56	69	93	95
17					43	53	71	90	62	77	103	107					47	58	78	90
18					36	45	60	81	52	66	87	96					40	50	66	85
19					31	39	52	72	45	56	75	86					34	43	57	80
20					27	33	44	65	39	48	65	78					29	37	49	73
21									34	42	56	71								
22									29	37	49	64								
23									26	32	43	59								
24									23	29	38	54								
25																				
26																				
27																				
28																				
29																				
30																				

Notes:

- Table values apply to uniformly loaded floor joists.
- Span is measured to the center of each support.
- Table values do not account for stiffness added by glued or nailed sheathing.
- Provide at least 1¼" of bearing length at end supports and 3½" at intermediate supports.
- Provide lateral restraint at supports (e.g. blocking panels, rim board) and along the compression flange of each joist (e.g. floor sheathing, gypsum board ceiling).
- Use sizing software or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing lengths, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.

Formatting in the Total column indicates where web stiffeners are required:

123 = All Supports **123** = Intermediate Supports Only **123** = End Supports Only 123 = Not Required

How to Use Commercial Floor Load Tables

- Choose a joist spacing and convert the live and total design loads specified in pounds per square foot (psf) to joist loads in pounds per lineal foot (plf).
Joist Spacing [ft] x Design Load [psf] = Joist Load [plf]

JOIST LOAD (PLF)

Joist Spacing		Design Load (psf)									
Inches	Feet	20	30	40	50	60	70	80	90	100	
12	1	20	30	40	50	60	70	80	90	100	
16	1.33	27	40	53	67	80	93	106	120	133	
19.2	1.6	32	48	64	80	96	112	128	144	160	
24	2	40	60	80	100	120	140	160	180	200	

- Choose deflection limits. The values in the Total columns are based on L/240. Building codes typically require L/360 for live load. Experience has shown that live load deflection limits of L/480 at 40 psf for residential floors and L/600 at 50 psf for commercial floors do a better job than L/360 of meeting most performance expectations.
- Choose a span and scan across the Span row to find a joist size with sufficient Live and Total load capacities. Both requirements must be satisfied. When no value is shown in a Live column, Total load governs.
- Formatting in the Total column indicates where web stiffeners are required:
123 = All Supports **123** = Intermediate Supports Only **123** = End Supports Only 123 = Not Required
- See *Web Stiffener Requirements* on page 93 for more details.

Commercial Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 40																PWI 45																	
	9½"				11½"				14"				16"				9½"				11½"				14"				16"					
	Live				Live				Live				Live				Live				Live				Live				Live					
	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL		
6	-	-	-	299	-	-	-	379	-	-	-	379	-	-	-	420	-	-	-	299	-	-	-	347	-	-	-	347	-	-	-	347		
7	-	-	-	256	-	-	-	325	-	-	-	325	-	-	-	360	-	-	-	256	-	-	-	297	-	-	-	297	-	-	-	297		
8	-	-	-	224	-	-	-	284	-	-	-	284	-	-	-	315	-	-	-	224	-	-	-	260	-	-	-	260	-	-	-	260		
9	187	-	-	199	-	-	-	252	-	-	-	252	-	-	-	280	187	-	-	199	-	-	-	231	-	-	-	231	-	-	-	231		
10	142	177	-	179	-	-	-	227	-	-	-	227	-	-	-	252	142	177	-	179	-	-	-	208	-	-	-	208	-	-	-	208		
11	110	137	-	163	178	-	-	207	-	-	-	207	-	-	-	229	110	137	-	163	178	-	-	189	-	-	-	189	-	-	-	189		
12	87	108	145	149	142	177	-	189	-	-	-	189	-	-	-	210	87	108	145	149	142	-	-	173	-	-	-	173	-	-	-	173		
13	70	87	116	129	114	143	-	168	161	-	-	175	-	-	-	194	70	87	116	138	114	143	-	-	160	-	-	-	160	-	-	-	160	
14	57	71	94	112	93	117	-	145	132	-	-	162	175	-	-	180	57	71	94	128	93	117	-	-	149	133	-	-	149	-	-	-	149	
15	47	58	78	97	77	96	-	126	110	137	-	151	146	-	-	168	47	58	78	116	77	96	129	139	111	138	-	139	-	-	-	139		
16	39	48	65	85	64	81	107	111	92	115	-	133	122	153	-	155	39	48	65	97	64	81	107	130	93	116	-	130	124	-	-	130		
17					54	68	91	98	78	97	-	118	104	130	-	137					54	68	91	119	78	98	-	122	105	-	-	122		
18					46	58	77	88	66	83	-	105	89	111	-	122					46	58	77	107	67	83	111	116	90	112	-	116		
19					40	50	66	79	57	71	95	95	76	95	-	110					40	50	66	96	57	72	96	109	77	96	-	109		
20					34	43	57	71	49	62	82	85	66	83	-	99					34	43	57	86	50	62	83	103	67	83	-	104		
21									43	54	71	77	58	72	-	90																	99	
22									38	47	63	71	50	63	-	82																	95	
23									33	41	55	65	44	56	74	75																	89	
24									29	37	49	59	39	49	66	69																	82	
25													35	44	58	63																	75	
26													31	39	52	59																	70	
27													28	35	47	54																	65	
28													25	32	42	51																	60	
29																																		
30																																		

See notes on page 38

PSF TO PLF CONVERSION - LOAD IN POUNDS PER LINEAL FOOT (PLF)

O.C. Spacing		Load in Pounds per Square Foot (psf)													
Inches	Feet	20	25	30	35	40	45	50	55	60	65	70	75		
12	1.00	20	25	30	35	40	45	50	55	60	65	70	75		
16	1.33	27	33	40	47	53	60	67	73	80	87	93	100		
19.2	1.60	32	40	48	56	64	72	80	88	96	104	112	120		
24	2.00	40	50	60	70	80	90	100	110	120	130	140	150		

o.c. spacing (ft) x load (psf) = load (plf)

Commercial Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 47																											
	7½"				9½"				11½"				14"				16"				18"				20"			
	Live				Live				Live				Live				Live				Live				Live			
	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL
6	-	-	-	283	-	-	-	307	-	-	-	341	-	-	-	371	-	-	-	399	-	-	-	428	-	-	-	457
7	-	-	-	243	-	-	-	263	-	-	-	292	-	-	-	318	-	-	-	342	-	-	-	367	-	-	-	391
8	182	-	-	213	-	-	-	230	-	-	-	256	-	-	-	278	-	-	-	300	-	-	-	321	-	-	-	343
9	134	167	-	189	197	-	-	204	-	-	-	227	-	-	-	247	-	-	-	266	-	-	-	285	-	-	-	304
10	101	126	168	170	150	-	-	184	-	-	-	204	-	-	-	222	-	-	-	240	-	-	-	257	-	-	-	274
11	78	97	129	155	116	145	-	167	184	-	-	186	-	-	-	202	-	-	-	218	-	-	-	233	-	-	-	249
12	61	76	102	142	92	115	153	153	147	-	-	170	-	-	-	185	-	-	-	200	-	-	-	214	-	-	-	228
13	49	61	81	122	74	92	123	142	118	148	-	157	166	-	-	171	-	-	-	184	-	-	-	198	-	-	-	211
14					60	75	100	131	97	121	-	146	136	-	-	159	-	-	-	171	-	-	-	183	-	-	-	196
15					49	62	82	119	80	100	133	136	113	141	-	148	149	-	-	160	-	-	-	171	-	-	-	183
16					41	51	69	103	67	84	111	128	95	118	-	139	125	-	-	150	159	-	-	161	-	-	-	171
17									56	71	94	118	80	100	-	131	106	133	-	141	135	-	-	151	-	-	-	161
18									48	60	80	106	68	85	114	124	91	113	-	133	116	-	-	143	144	-	-	152
19									41	51	69	95	59	73	98	112	78	98	-	126	100	125	-	135	124	-	-	144
20									36	44	59	86	51	64	85	102	68	84	113	116	87	108	-	128	108	135	-	137
21													44	55	74	92	59	74	98	105	76	95	-	118	95	118	-	130
22													39	48	65	84	52	65	86	96	66	83	-	107	83	104	-	119
23													34	43	57	77	46	57	76	88	59	73	98	98	73	92	-	109
24													30	38	50	70	40	50	67	80	52	65	87	90	65	81	-	100
25																	36	45	60	74	46	58	77	83	58	72	-	92
26																	32	40	53	69	41	52	69	77	52	65	-	85
27																	29	36	48	64	37	46	62	71	47	58	78	79
28																	26	32	43	59	33	42	56	66	42	52	70	73
29																					30	38	50	62	38	47	63	68
30																					27	34	46	58	34	43	57	64
31																					25	31	42	54	31	39	52	60
32																									29	36	48	56
33																									26	33	44	53
34																									24	30	40	50
35																									22	28	37	47

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 50																PWI 60																
	9½"				11½"				14"				16"				9½"				11½"				14"				16"				
	Live				Live				Live				Live				Live				Live				Live				Live				
	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL	L/600	L/480	L/360	TOTAL					
6	-	-	-	272	-	-	-	272	-	-	-	272	-	-	-	272	-	-	-	299	-	-	-	379	-	-	-	379	-	-	-	420	
7	-	-	-	233	-	-	-	233	-	-	-	233	-	-	-	233	-	-	-	256	-	-	-	325	-	-	-	325	-	-	-	360	
8	-	-	-	204	-	-	-	204	-	-	-	204	-	-	-	204	-	-	-	224	-	-	-	284	-	-	-	284	-	-	-	315	
9	-	-	-	181	-	-	-	181	-	-	-	181	-	-	-	181	-	-	-	199	-	-	-	252	-	-	-	252	-	-	-	280	
10	138	-	-	163	-	-	-	163	-	-	-	163	164	-	-	-	163	164	-	-	179	-	-	-	227	-	-	-	227	-	-	-	252
11	107	133	-	148	-	-	-	148	-	-	-	148	-	-	-	148	128	160	-	163	206	-	-	-	207	-	-	-	207	-	-	-	229
12	84	105	-	136	-	-	-	136	-	-	-	136	-	-	-	136	101	127	-	149	165	-	-	-	189	-	-	-	189	-	-	-	210
13	67	84	112	126	112	-	-	126	-	-	-	126	-	-	-	126	81	102	136	138	133	167	-	175	-	-	-	175	-	-	-	194	
14	55	68	91	117	91	114	-	117	-	-	-	117	-	-	-	117	66	83	111	128	109	137	-	162	155	-	-	162	-	-	-	180	
15	45	56	75	109	75	94	-	109	-	-	-	109	-	-	-	109	55	68	91	119	91	113	151	151	129	-	-	151	-	-	-	168	
16	37	47	62	94	63	79	-	102	92	-	-	102	-	-	-	102	46	57	76	112	76	95	126	142	109	136	-	142	144	-	-	158	
17					53	66	89	96	77	-	-	96	-	-	-	96					64	80	107	134	92	115	-	134	123	-	-	148	
18					45	57	75	91	66	82	-	91	89	-	-	91					55	68	91	121	79	98	-	126	105	131	-	140	
19					39	48	65	86	57	71	-	86	77	-	-	86					47	59	78	109	68	85	113	120	91	113	-	133	
20					33	42	56	82	49	61	82	82	67	-	-	82					41	51	68	98	59	73	98	114	79	98	-	126	
21									43	53	71	78	58	73	-	78									51	64	85	107	69	86	115	120	
22									37	47	62	74	51	64	-	74									45	56	75	97	60	75	101	113	
23									33	41	55	71	45	56	-	71									39	49	66	89	53	67	89	103	
24									29	36	48	68	40	50	66	68									35	44	58	82	47	59	79	95	
25													35	44	59	65																87	
26													32	39	53	63																81	
27													28	35	47	60																75	
28													25	32	42	58																70	

See notes on page 41

Commercial Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 70																			
	11½"				14"				16"				18"				20"			
	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL
	L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360	
6	-	-	-	379	-	-	-	420	-	-	-	420	-	-	-	467	-	-	-	467
7	-	-	-	325	-	-	-	360	-	-	-	360	-	-	-	400	-	-	-	400
8	-	-	-	284	-	-	-	315	-	-	-	315	-	-	-	350	-	-	-	350
9	-	-	-	252	-	-	-	280	-	-	-	280	-	-	-	311	-	-	-	311
10	-	-	-	227	-	-	-	252	-	-	-	252	-	-	-	280	-	-	-	280
11	-	-	-	207	-	-	-	229	-	-	-	229	-	-	-	255	-	-	-	255
12	179	-	-	189	-	-	-	210	-	-	-	210	-	-	-	233	-	-	-	233
13	145	-	-	175	-	-	-	194	-	-	-	194	-	-	-	215	-	-	-	215
14	119	149	-	162	168	-	-	180	-	-	-	180	-	-	-	200	-	-	-	200
15	99	124	-	151	140	-	-	168	-	-	-	168	-	-	-	187	-	-	-	187
16	83	104	139	142	118	148	-	158	155	-	-	158	-	-	-	175	-	-	-	175
17	70	88	117	134	100	125	-	148	132	-	-	148	-	-	-	165	-	-	-	165
18	60	75	100	126	86	107	-	140	113	-	-	140	145	-	-	156	-	-	-	156
19	52	64	86	120	74	92	123	133	98	122	-	133	125	-	-	147	-	-	-	147
20	45	56	74	112	64	80	107	126	85	106	-	126	109	136	-	140	136	-	-	140
21					56	70	93	120	74	93	-	120	95	119	-	133	119	-	-	133
22					49	61	82	115	65	82	109	115	84	105	-	127	105	-	-	127
23					43	54	72	108	58	72	96	110	74	93	-	122	93	116	-	122
24					38	48	64	96	51	64	85	105	66	82	110	117	82	103	-	117
25									46	57	76	101	59	73	98	112	74	92	-	112
26									41	51	68	97	53	66	88	108	66	82	-	108
27									37	46	61	92	47	59	79	104	59	74	99	104
28									33	41	55	82	43	53	71	100	54	67	89	100
29													39	48	64	97	48	61	81	97
30													35	44	58	88	44	55	73	93
31													32	40	53	80	40	50	67	90
32																	37	46	61	88
33																	34	42	56	84
34																	31	38	51	77
35																	28	35	47	71

Notes:

1. Table values apply to uniformly loaded floor joists.
2. Span is measured to the center of each support.
3. Table values do not account for stiffness added by glued or nailed sheathing.
4. Provide at least 1¾" of bearing length at end supports and 3½" at intermediate supports.
5. Provide lateral restraint at supports (e.g. blocking panels, rim board) and along the compression flange of each joist (e.g. floor sheathing, gypsum board ceiling).
6. Use sizing software or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing lengths, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.

Formatting in the Total column indicates where web stiffeners are required:

123 = All Supports

123 = Intermediate Supports Only

123 = End Supports Only

123 = Not Required

Commercial Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 77																																			
	9½"				11½"				14"				16"				18"				20"				22"				24"							
	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL				
L/600	L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600		L/480	L/360	L/600	L/480
6	-	-	-	381	-	-	-	404	-	-	-	404	-	-	-	404	-	-	-	503	-	-	-	503	-	-	-	550	-	-	-	550				
7	-	-	-	327	-	-	-	346	-	-	-	346	-	-	-	346	-	-	-	431	-	-	-	431	-	-	-	471	-	-	-	471				
8	-	-	-	286	-	-	-	303	-	-	-	303	-	-	-	303	-	-	-	377	-	-	-	377	-	-	-	413	-	-	-	413				
9	248	-	-	254	-	-	-	269	-	-	-	269	-	-	-	269	-	-	-	335	-	-	-	335	-	-	-	367	-	-	-	367				
10	189	-	-	229	-	-	-	242	-	-	-	242	-	-	-	242	-	-	-	302	-	-	-	302	-	-	-	330	-	-	-	330				
11	147	183	-	208	-	-	-	220	-	-	-	220	-	-	-	220	-	-	-	274	-	-	-	274	-	-	-	300	-	-	-	300				
12	116	145	-	191	187	-	-	202	-	-	-	202	-	-	-	202	-	-	-	251	-	-	-	251	-	-	-	275	-	-	-	275				
13	93	116	155	176	151	-	-	186	-	-	-	186	-	-	-	186	-	-	-	232	-	-	-	232	-	-	-	254	-	-	-	254				
14	76	95	126	163	124	155	-	173	-	-	-	173	-	-	-	173	-	-	-	215	-	-	-	215	-	-	-	236	-	-	-	236				
15	62	78	104	153	102	128	-	162	146	-	-	162	-	-	-	162	-	-	-	201	-	-	-	201	-	-	-	220	-	-	-	220				
16	52	65	87	130	86	107	143	152	122	-	-	152	-	-	-	152	-	-	-	189	-	-	-	189	-	-	-	206	-	-	-	206				
17					72	90	120	143	103	129	-	143	138	-	-	143	176	-	-	177	-	-	-	177	-	-	-	194	-	-	-	194				
18					61	77	102	135	88	110	-	135	118	-	-	135	151	-	-	168	-	-	-	168	-	-	-	183	-	-	-	183				
19					53	66	88	128	76	95	126	128	101	127	-	128	130	-	-	159	-	-	-	159	-	-	-	174	-	-	-	174				
20					46	57	76	114	66	82	109	121	88	110	-	121	113	141	-	151	141	-	-	151	-	-	-	165	-	-	-	165				
21									57	71	95	115	77	96	-	115	99	123	-	144	123	-	-	144	123	-	-	157	-	-	-	157				
22									50	63	84	110	67	84	-	110	87	108	-	137	108	136	-	137	108	136	-	150	-	-	-	150				
23									44	55	74	105	59	74	99	105	76	96	127	131	96	120	-	131	117	-	-	143	141	-	-	143				
24									39	49	65	98	52	66	87	101	68	85	113	126	85	106	-	126	104	130	-	138	125	-	-	138				
25													47	58	78	97	60	75	101	121	76	95	-	121	93	116	-	132	112	-	-	132				
26													42	52	70	93	54	68	90	116	68	85	113	116	83	104	-	127	100	125	-	127				
27													37	47	62	90	48	61	81	112	61	76	102	112	75	94	-	122	90	113	-	122				
28													34	42	56	84	44	55	73	105	55	69	92	108	68	84	113	118	81	102	-	118				
29																	39	49	66	98	50	62	83	104	61	76	102	114	74	92	-	114				
30																	36	45	60	90	45	56	75	101	56	69	93	110	67	84	-	110				
31																	33	41	54	81	41	51	68	95	51	63	84	104	61	76	102	106				
32																					37	47	62	89	46	58	77	98	56	70	93	103				
33																					34	43	57	84	42	53	70	92	51	64	85	100				
34																					31	39	52	79	39	48	65	87	47	59	78	94				
35																					29	36	48	72	36	45	59	82	43	54	72	89				
36																									33	41	55	77	40	50	66	84				
37																									30	38	51	73	37	46	61	80				
38																									28	35	47	69	34	42	57	76				
39																													32	39	53	72				
40																													29	37	49	68				
41																													27	34	45	65				
42																													25	32	42	62				

Notes:

1. Table values apply to uniformly loaded floor joists.
2. Span is measured to the center of each support.
3. Table values do not account for stiffness added by glued or nailed sheathing.
4. Provide at least 1¼" of bearing length at end supports and 3½" at intermediate supports.
5. Provide lateral restraint at supports (e.g. blocking panels, rim board) and along the compression flange of each joist (e.g. floor sheathing, gypsum board ceiling).
6. Use sizing software or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing lengths, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.

Formatting in the Total column indicates where web stiffeners are required:

123 = All Supports

123 = Intermediate Supports Only

123 = End Supports Only

123 = Not Required

Commercial Floor Loads

SIMPLE- OR MULTIPLE-SPAN JOIST: COMMERCIAL-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 90																																
	9½"				11½"				14"				16"				18"				20"				22"				24"				
	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL	Live			TOTAL					
	L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		L/600	L/480	L/360		
6	-	-	-	381	-	-	-	513	-	-	-	514	-	-	-	514	-	-	-	581	-	-	-	581	-	-	-	614	-	-	-	614	
7	-	-	-	327	-	-	-	440	-	-	-	441	-	-	-	441	-	-	-	498	-	-	-	498	-	-	-	526	-	-	-	526	
8	-	-	-	286	-	-	-	385	-	-	-	386	-	-	-	386	-	-	-	436	-	-	-	436	-	-	-	461	-	-	-	461	
9	-	-	-	254	-	-	-	342	-	-	-	343	-	-	-	343	-	-	-	387	-	-	-	387	-	-	-	409	-	-	-	409	
10	-	-	-	229	-	-	-	308	-	-	-	308	-	-	-	308	-	-	-	348	-	-	-	348	-	-	-	368	-	-	-	368	
11	204	-	-	208	-	-	-	280	-	-	-	280	-	-	-	280	-	-	-	317	-	-	-	317	-	-	-	335	-	-	-	335	
12	163	-	-	191	-	-	-	257	-	-	-	257	-	-	-	257	-	-	-	290	-	-	-	290	-	-	-	307	-	-	-	307	
13	132	165	-	176	210	-	-	237	-	-	-	237	-	-	-	237	-	-	-	268	-	-	-	268	-	-	-	283	-	-	-	283	
14	108	135	-	163	173	216	-	220	-	-	-	220	-	-	-	220	-	-	-	249	-	-	-	249	-	-	-	263	-	-	-	263	
15	90	112	149	153	144	180	-	205	202	-	-	206	-	-	-	206	-	-	-	232	-	-	-	232	-	-	-	246	-	-	-	246	
16	75	94	125	143	121	152	-	193	171	-	-	193	-	-	-	193	-	-	-	218	-	-	-	218	-	-	-	230	-	-	-	230	
17					103	129	172	181	146	-	-	181	-	-	-	181	-	-	-	205	-	-	-	205	-	-	-	217	-	-	-	217	
18					88	110	147	171	125	156	-	171	165	-	-	171	-	-	-	194	-	-	-	194	-	-	-	205	-	-	-	205	
19					76	95	127	162	108	135	-	162	142	-	-	162	181	-	-	183	-	-	-	183	-	-	-	194	-	-	-	194	
20					66	82	110	154	94	117	-	154	124	-	-	154	158	-	-	174	-	-	-	174	-	-	-	184	-	-	-	184	
21									82	102	137	147	109	136	-	147	139	-	-	166	-	-	-	166	-	-	-	175	-	-	-	175	
22									72	90	120	140	96	119	-	140	122	153	-	158	152	-	-	158	-	-	-	167	-	-	-	167	
23									64	79	106	134	85	106	-	134	108	135	-	151	135	-	-	151	-	-	-	160	-	-	-	160	
24									56	71	94	129	75	94	125	129	96	120	-	145	120	-	-	145	146	-	-	154	-	-	-	154	
25													67	84	112	123	86	108	-	139	107	134	-	139	130	-	-	147	-	-	-	147	
26													60	75	100	119	77	96	129	134	96	120	-	134	117	-	-	142	140	-	-	142	
27													54	67	90	114	69	87	116	129	87	108	-	129	106	132	-	136	126	-	-	136	
28													49	61	81	110	63	78	104	124	78	98	-	124	96	119	-	132	114	-	-	132	
29																	57	71	95	120	71	89	118	120	87	108	-	127	104	-	-	127	
30																	52	64	86	116	65	81	108	116	79	99	-	123	95	118	-	123	
31																	47	59	78	112	59	74	98	112	72	90	-	119	86	108	-	119	
32																					54	67	90	109	66	82	110	115	79	99	-	115	
33																					49	62	82	106	60	75	101	112	72	91	-	112	
34																					45	57	75	102	55	69	92	108	67	83	-	108	
35																					42	52	69	100	51	64	85	105	61	77	102	105	
36																									47	59	78	102	57	71	94	102	
37																									44	54	73	100	52	66	87	100	
38																									40	50	67	97	49	61	81	97	
39																																	94
40																																	92
41																																	90
42																																	88

See notes on page 42