THE SUBGROUP LATTICE OF $J_2 : 2$

THOMAS CONNOR AND DIMITRI LEEMANS

Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
1	$J_2 : 2$	1209600	1	2, 3 (100), 5 (280), 6 (315), 7 (525), 12 (840), 13 (1008), 21 (1800), 23 (2016), 85 (10080)	
2	J_2	604800	1	4 (100), 8 (280), 11 (315), 14 (525), 20 (840), 24 (1008), 37 (1800), 41 (2016), 141 (10080)	1
3	$U_3(3) : 2$	12096	100	4, 27 (28), 38 (36), 56 (63), 57 (63)	1
4	$U_3(3)$	6048	100	52 (28), 70 (36), 97 (63), 98 (63)	2, 3
5	$3 \cdot S_6 : 2$	4320	280	9, 8, 10, 27 (10), 86 (36), 99 (45)	1
6	$2^{1+4} \cdot (A_5 : 2)$	3840	315	11, 18 (5), 22 (6), 28 (10), 47 (16)	1
7	$2 \times 4 : 2 : 2 : 2 : S_3 : S_3$	2304	525	15, 16, 14, 19 (3), 18 (3), 75 (16)	1
8	$3 \cdot A_6 : 2$	2160	280	17, 52 (10), 142 (36), 153 (45)	2, 5
9	$3 \cdot S_6$	2160	280	17, 36 (12), 53 (10), 75 (30)	5
10	$3 \cdot A_6 \cdot 2$	2160	280	17, 54 (10), 143 (36), 154 (45)	5
11	$2^{1+4} : A_5$	1920	315	29 (5), 40 (6), 58 (10), 87 (16)	2, 6
12	$A_5 \times 2 \times 2 : S_3$	1440	840	20, 26 (3), 36 (4), 45 (5), 48 (6), 76 (10)	1
13	$A_5 \times 5 : 2 \cdot 2$	1200	1008	24, 47 (5), 48 (5), 55 (6), 86 (10)	1
14	$2^3 \cdot 2 : 2 : 2 : 3 : S_3$	1152	525	25, 30, 29 (3), 120 (16)	2, 7

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
15	$Q_8 \times 2 : 2 : 2 : 3 : S_3$	1152	525	25, 31, 32 (3), 121 (16)	7
16	$2^4 : 3 : 2 : 2 : S_3$	1152	525	25, 33 (6), 34 (3), 35 (3), 45 (8)	7
17	$3 \cdot A_6$	1080	280	69 (12), 91 (10), 120 (30)	8, 9, 10
18	$2^{1+4} : 2^2 : S_3$	768	1575	35, 31, 29, 46 (3), 59 (4)	6, 7
19	$Q_8 \times 2 : 2 \cdot 2 : 2 : S_3$	768	1575	32, 30, 34, 46 (3), 57 (4)	7
20	$A_5 \times 2 \times 2 : 3$	720	840	49, 69 (4), 77 (5), 88 (6), 122 (10)	2, 12
21	$L_2(7) : 2 \times 2$	672	1800	37, 38, 39, 117 (8), 188 (21), 223 (28)	1
22	$2^{1+4} : (D_{10} \cdot 2)$	640	1890	40, 78 (5), 181 (16)	6
23	$5^2 : 2 \cdot 2 : S_3$	600	2016	41, 42, 43, 55 (3), 224 (25)	1
24	$A_5 \times 5 : 2$	600	1008	44, 87 (5), 88 (5), 94 (6), 142 (10)	2, 13
25	$2^4 : 3 : 2 : 2 : 3$	576	525	60, 61, 62 (2), 77 (8)	14, 15, 16
26	$A_5 \times 2 \times 2 : 2$	480	2520	50, 51, 49, 100 (5), 118 (6), 155 (10)	12
27	$3^{1+2} : (D_8 \cdot 2)$	432	2800	53, 52, 54, 156 (9)	3, 5
28	$2^{1+4} : 2 : S_3$	384	3150	63, 58, 59, 64, 65, 56, 66, 79 (3), 99 (4)	6
29	$2^{1+4} : A_4$	384	1575	61, 80, 101 (4)	11, 14, 18
30	$2 \times 4 : 2 : 2 : 2 : S_3$	384	525	60, 80 (3), 97 (12)	14, 19 (3)
31	$2 \times 4 : 2 : 2 : 2 : S_3$	384	525	61, 81 (3), 102 (12)	15, 18 (3)
32	$2 \times 4 : 2 : 2 : 2 : 3 : 2$	384	1575	60, 81, 103 (4)	15, 19
33	$D_8 \times 2 : 2 : 2 : S_3$	384	3150	62, 67, 68, 82 (3), 100 (4)	16
34	$2 \times 4 : 2 : 2 : 2 : S_3$	384	1575	60, 82 (3), 104 (4), 105 (8)	16, 19
35	$2 \times 4 : 2 : 2 : 2 : S_3$	384	1575	61, 82 (3), 106 (8), 107 (4)	16, 18
36	$A_5 : S_3$	360	3360	69, 89 (3), 123 (5), 144 (6), 185 (10)	9, 12
37	$L_2(7) : 2$	336	1800	70, 178 (8), 263 (21), 299 (28)	2, 21
38	$L_2(7) : 2$	336	1800	70, 179 (8), 264 (21), 300 (28)	3 (2), 21
39	$L_2(7) \times 2$	336	1800	70, 157 (14), 180 (8)	21
40	$2^{1+4} : (D_{10})$	320	1890	71, 126 (5), 252 (16)	11, 22

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
41	$5^2 : 2 : S_3$	300	2016	72, 73, 74, 94 (3), 299 (25)	2, 23
42	$5^2 : 3 : 2 \cdot 2$	300	2016	72, 95, 301 (25)	23
43	$5^2 : 2 \cdot S_3$	300	2016	72, 96 (3), 302 (25)	23
44	$A_5 \times 5$	300	1008	145, 146 (5), 150 (6), 217 (10)	24
45	$A_4 \times 2 \times 2 : S_3$	288	4200	77, 100 (3), 108 (3), 106 (3), 105 (3), 123 (4), 124 (4)	12, 16
46	$2^{1+4} \cdot D_8$	256	4725	81, 78, 80, 83, 82, 84, 79	18, 19
47	$A_5 \times 2 \cdot 2$	240	5040	87, 158 (5), 181 (6), 225 (10)	6, 13
48	$D_{20} \times 2 \cdot S_3$	240	5040	88, 118 (3), 144 (4), 158 (5)	12, 13
49	$A_5 \times 2 \times 2$	240	840	90 (3), 159 (5), 182 (6), 226 (10)	20, 26 (3)
50	$A_5 \times 2 \cdot 2$	240	2520	90, 160 (5), 183 (6), 224 (10)	26
51	$A_5 : 2 \times 2$	240	2520	89 (2), 90, 161 (5), 184 (6), 223 (10)	26
52	$3^{1+2} : 8$	216	2800	91, 227 (9)	4, 8, 27
53	$3^{1+2} : D_8$	216	2800	91, 92 (2), 228 (9)	9, 27
54	$3^{1+2} : Q_8$	216	2800	93 (2), 91, 229 (9)	10, 27
55	$5^2 : 2 : 2 \cdot 2$	200	6048	96, 95, 94, 183 (5), 181 (5)	13, 23
56	$2^{1+4} : S_3$	192	3150	109, 110, 98, 127 (3), 156 (4)	3 (2), 28
57	$D_8 \times 2 : 2 : S_3$	192	6300	104, 103, 97, 127 (3), 157 (4)	3, 19
58	$2^{1+4} : S_3$	192	3150	98, 111, 101, 126 (3), 153 (4)	11, 28
59	$2^{1+4} : S_3$	192	3150	101, 112, 102 (2), 107 (2), 109, 128 (3), 162 (4)	18 (2), 28
60	$2 \times 4 : 2 : 2 : 2 : 3$	192	525	129, 163 (12), 164 (8)	25, 30, 32 (3), 34 (3)
61	$2 \times 4 : 2 : 2 : 2 : 3$	192	525	129, 165 (12), 166 (8)	25, 29 (3), 31, 35 (3)
62	$2^4 : 3 : 2 : 2$	192	1050	113 (3), 129, 159 (4)	25, 33 (3)
63	$Q_8 \cdot 4 : S_3$	192	3150	114, 112, 98, 130 (3), 167 (4)	28
64	$D_8 \cdot 4 : S_3$	192	3150	114, 109, 111, 131 (3), 168 (4)	28

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
65	$2^{1+4} \cdot 6$	192	3150	114, 101, 110, 128, 154 (4)	28
66	$2^{1+4} : S_3$	192	3150	111, 115 (2), 110, 112, 116 (2), 132 (3), 169 (4)	28
67	$2 \times 4 : 2 : 2 : S_3$	192	3150	113, 108 (2), 133 (3), 161 (4)	33
68	$D_8 \times 2 : 2 \cdot S_3$	192	3150	113, 134 (3), 160 (4)	33
69	$A_5 \times 3$	180	3360	147, 186 (5), 218 (6), 260 (10)	17, 20, 36
70	$L_2(7)$	168	1800	230 (14), 251 (8)	4 (2), 37, 38, 39
71	$2^{1+4} : 5$	160	1890	189, 320 (16)	40
72	$5^2 : 3 : 2$	150	2016	119, 151, 349 (25)	41, 42, 43
73	$5^2 : S_3$	150	2016	119, 150 (3), 350 (25)	41
74	$5^2 : S_3$	150	2016	119, 152 (3), 351 (25)	41
75	$S_3 \times 2^2 : S_3$	144	8400	121, 123, 120, 162 (3), 157 (3), 185 (4)	7, 9
76	$2^2 : S_3 \times S_3$	144	8400	125, 122, 124, 170 (3), 155 (3), 185 (4)	12
77	$2^4 : 3 : 3$	144	4200	159, 166, 171, 164, 187 (4), 186 (4)	20, 25, 45
78	$2^{1+4} : 4$	128	4725	135, 126, 136	22 (2), 46
79	$2^{1+4} : 2^2$	128	4725	127 (2), 131 (2), 137 (2), 130 (2), 138, 132 (2), 139, 128 (2), 126	28 (2), 46
80	$2^{1+4} : 2^2$	128	1575	129, 126 (3), 140 (3)	29, 30, 46 (3)
81	$2 \times 8 \cdot 2 : 2 : 2$	128	1575	129, 135 (3), 138 (3)	31, 32, 46 (3)
82	$2^{1+4} \cdot 2^2$	128	4725	133 (2), 134 (2), 139, 136, 129	33 (2), 34, 35, 46
83	$D_8 \times 2 \cdot 2 \cdot 2 : 2$	128	4725	138, 140, 136	46
84	$2^{1+4} \cdot 4$	128	4725	135, 140, 139	46
85	$A_5 : 2$	120	10080	141, 231 (5), 253 (6), 303 (10)	1
86	$D_{10} \cdot 2 \times S_3$	120	10080	143, 142, 144, 184 (3), 225 (5)	5, 13
87	$A_5 \times 2$	120	5040	145, 232 (5), 252 (6), 304 (10)	11, 24, 47
88	$2 \times 10 : 3 : 2$	120	5040	146, 182, 218 (4), 232 (5)	20, 24, 48
89	S_5	120	5040	147, 233 (5), 254 (6), 300 (10)	36 (2), 51
90	$A_5 \times 2$	120	2520	147, 234 (5), 255 (6), 299 (10)	49, 50, 51

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
91	$3^{1+2} : 4$	108	2800	148, 305 (9)	17, 52, 53, 54
92	$3^{1+2} : 2^2$	108	5600	149 (2), 148, 185 (6)	53
93	$3^{1+2} : 4$	108	5600	148, 306 (9)	54
94	$5^2 : 2 : 2$	100	6048	152, 151, 150, 252 (5), 255 (5)	24, 41, 55
95	$5^2 : 2 \cdot 2$	100	2016	151, 256 (15), 257 (15)	42, 55 (3)
96	$5^2 : 2 \cdot 2$	100	6048	151, 257 (5), 253 (5)	43, 55
97	$4^2 : S_3$	96	6300	163, 190 (3), 230 (4)	4, 30, 57
98	$D_8 : 2 \cdot S_3$	96	3150	172, 190 (3), 227 (4)	4 (2), 56, 58, 63
99	$D_8 \cdot 2 : S_3$	96	12600	168, 156, 167, 162, 153, 169, 154, 191 (3)	5, 28
100	$2^4 : S_3$	96	12600	161, 160, 159, 192 (3), 235 (4)	26, 33, 45
101	$2^{1+4} : 3$	96	3150	165 (2), 172, 189, 236 (4)	29 (2), 58, 59, 65
102	$Q_8 \times 2 : S_3$	96	6300	165, 173, 174, 193 (3), 237 (4)	31, 59
103	$4^2 : 3 : 2$	96	6300	163, 194, 238 (4)	32, 57
104	$4^2 : S_3$	96	6300	163, 195 (3), 239 (4)	34, 57
105	$2^4 : S_3$	96	12600	164, 192 (3), 231 (4), 239 (4), 240 (4)	34, 45
106	$2^4 : S_3$	96	12600	158, 170, 166, 192 (3), 241 (4)	35, 45
107	$Q_8 \times 2 : S_3$	96	6300	165, 174, 175, 196 (3), 241 (4)	35, 59
108	$2^4 : S_3$	96	6300	171, 192 (3), 233 (4), 240 (8)	45 (2), 67
109	$D_8 : 2 : S_3$	96	3150	174 (2), 172, 197 (3), 228 (4)	56, 59, 64
110	$2^{1+4} : 3$	96	3150	172, 176 (2), 198, 229 (4)	56, 65, 66
111	$D_8 : 2 : S_3$	96	3150	172, 177 (2), 199 (3), 242 (4)	58, 64, 66
112	$D_8 : 2 : S_3$	96	3150	172, 173, 175, 200 (3), 243 (4)	59, 63, 66
113	$2^4 : 3 : 2$	96	3150	171, 201, 234 (4)	62, 67, 68
114	$Q_8 \cdot 12$	96	3150	172, 202, 244 (4)	63, 64, 65
115	$D_8 : 2 : S_3$	96	6300	173, 177, 176, 203 (3), 245 (4)	66
116	$D_8 : 2 : S_3$	96	6300	175, 177, 176, 204 (3), 225 (4)	66
117	$7 : 3 : 2 \times 2$	84	14400	180, 179, 178, 220, 307 (7)	21

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
118	$D_{10} \cdot 2 \times 2 : 2$	80	15120	184, 182, 183, 265 (5)	26, 48
119	$5^2 : 3$	75	2016	222, 368 (25)	72, 73, 74
120	$2 \times 6 : S_3$	72	8400	186, 230, 236 (3), 260 (4)	14, 17, 75
121	$A_4 \times S_3$	72	8400	186, 237, 238 (3), 261 (4)	15, 75
122	$A_4 \times S_3$	72	8400	187, 226, 232 (3), 260 (4)	20, 76
123	$A_4 : S_3$	72	8400	186, 239 (3), 233 (6), 241 (3), 262 (4)	36 (2), 45 (2), 75
124	$A_4 : S_3$	72	8400	187, 235 (3), 240 (6), 246 (3), 262 (4)	45 (2), 76
125	$2 \times 6 : S_3$	72	8400	187, 246, 247 (3), 261 (4)	76
126	$2^{1+4} : 2$	64	4725	205, 206, 190 (2), 199 (2), 189	40 (2), 58 (2), 78, 79, 80
127	$2^{1+4} : 2$	64	9450	194, 195, 207, 208, 198, 190, 197	56, 57 (2), 79
128	$2^{1+4} : 2$	64	3150	198, 197 (3), 196 (3), 200 (3), 193 (3), 202, 189	59 (3), 65, 79 (3)
129	$2 \times 4 : 2 : 2 : 2$	64	525	201 (6), 205 (9)	60, 61, 62 (2), 80 (3), 81 (3), 82 (9)
130	$D_8 \cdot (2 \times 4)$	64	9450	195, 209, 210, 211, 190, 202, 200	63, 79
131	$D_8 \cdot D_8$	64	9450	207, 209, 212, 213, 197, 199, 202	64, 79
132	$2^{1+4} : 2$	64	9450	214, 191 (2), 188 (2), 211, 208, 212, 203 (2), 204 (2), 200, 198, 199	66, 79
133	$2^{1+4} : 2$	64	9450	192 (2), 201, 215 (2), 216, 214	67, 82
134	$8 : 2 : 2 : 2$	64	9450	201, 216, 213	68, 82
135	$2 \times 8 \cdot 2 : 2$	64	4725	205, 210 (2)	78, 81, 84
136	$D_8 \times 2 \cdot 2 \cdot 2$	64	4725	216 (2), 205	78, 82, 83
137	$D_8 \cdot D_8$	64	9450	208, 196, 207, 206, 193, 211, 209	79
138	$Q_8 : 2^2 : 2$	64	4725	194, 193 (2), 212 (2), 205, 210	79, 81, 83
139	$2^{1+4} \cdot 2$	64	4725	214, 196 (2), 195 (2), 205, 213	79, 82, 84

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
140	$Q_8 \times 2 \cdot 2 : 2$	64	4725	205, 206 (2)	80, 83, 84
141	A_5	60	10080	308 (5), 321 (6), 350 (10)	2, 85
142	$D_{10} \times S_3$	60	10080	218, 217, 219, 255 (3), 304 (5)	8, 24, 86
143	$15 : 2 \cdot 2$	60	10080	218, 254, 306 (5)	10, 86
144	$D_{10} \cdot S_3$	60	10080	218, 254 (3), 309 (5)	36 (2), 48 (2), 86
145	A_5	60	1008	310 (5), 322 (6), 352 (10)	44, 87 (5)
146	$2 \times 10 : 3$	60	5040	258, 295 (4), 310	44, 88
147	A_5	60	840	311 (5), 323 (6), 351 (10)	69 (4), 89 (6), 90 (3)
148	$3^{1+2} : 2$	54	2800	221, 260 (12)	91, 92 (2), 93 (2)
149	$3^{1+2} : 2$	54	11200	221, 262, 261 (3)	92
150	$5^2 : 2$	50	6048	222, 322, 324 (5)	44, 73, 94
151	$5^2 : 2$	50	2016	222, 321 (15), 325 (15)	72, 94 (3), 95, 96 (3)
152	$5^2 : 2$	50	6048	222, 323, 320 (5)	74, 94
153	$D_8 : S_3$	48	12600	227, 236, 242, 263 (3)	8, 58, 99
154	$Q_8 : 6$	48	12600	244, 229, 236, 266	10, 65, 99
155	$D_8 \times S_3$	48	25200	248, 247, 226, 223, 235, 224, 249, 267 (3)	26, 76
156	$Q_8 : S_3$	48	12600	227, 229, 228, 268 (3)	27 (2), 56, 99
157	$2^3 : S_3$	48	25200	239, 238, 230, 269 (3), 300 (4)	39, 57, 75
158	$2^3 \cdot S_3$	48	12600	232, 265 (3), 309 (4)	47 (2), 48 (2), 106
159	$A_4 \times 2 \times 2$	48	4200	234 (3), 270, 312 (4)	49, 62, 77, 100 (3)
160	$2^3 \cdot S_3$	48	12600	234, 271 (3), 302 (4)	50, 68, 100
161	$2^3 : S_3$	48	12600	233 (2), 234, 272 (3), 313 (4)	51, 67, 100
162	$D_8 \times S_3$	48	12600	237 (2), 243, 241 (2), 236, 228, 269 (3)	59, 75 (2), 99
163	$4^2 : 3$	48	6300	273, 314 (4)	60, 97, 103, 104
164	$2^4 : 3$	48	4200	270, 308 (12), 314 (4), 315 (4)	60, 77, 105 (3)
165	$Q_8 : 6$	48	6300	250, 274, 316 (4)	61, 101, 102, 107
166	$A_4 \times 2 \times 2$	48	4200	232 (3), 270, 316 (4)	61, 77, 106 (3)
167	$8 : S_3$	48	12600	227, 244, 243, 275 (3)	63, 99
168	D_{48}	48	12600	242, 244, 228, 276 (3)	64, 99
169	$Q_8 : S_3$	48	12600	243, 245 (2), 225 (2), 229, 242, 277 (3)	66, 99
170	$2^3 : S_3$	48	12600	246 (2), 232, 267 (3), 317 (4)	76 (2), 106

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
171	$2^4 : 3$	48	1050	270, 315 (16), 311 (4)	77 (4), 108 (6), 113 (3)
172	$Q_8 \cdot 6$	48	3150	250, 278, 305 (4)	98, 101, 109, 110, 111, 112, 114
173	$Q_8 : S_3$	48	3150	250, 279 (3), 318 (4)	102 (2), 112, 115 (2)
174	$Q_8 : S_3$	48	6300	250, 280 (3), 317 (4)	102, 107, 109
175	$Q_8 \cdot S_3$	48	3150	250, 281 (3), 309 (4)	107 (2), 112, 116 (2)
176	$Q_8 \cdot 6$	48	6300	250, 282, 306 (4)	110, 115, 116
177	$Q_8 : S_3$	48	6300	250, 283 (3), 304 (4)	111, 115, 116
178	$7 : 3 : 2$	42	14400	251, 296, 349 (7)	37, 117
179	$7 : 3 : 2$	42	14400	251, 297, 353 (7)	38, 117
180	$7 : 3 \times 2$	42	14400	251, 298, 353 (7)	39, 117
181	$D_{10} \cdot 2 \times 2$	40	30240	256, 252, 253, 327 (5)	22, 47, 55
182	$D_{20} \times 2$	40	5040	255 (3), 259 (3), 258, 328 (5)	49, 88, 118 (3)
183	$D_{10} \cdot 2 \times 2$	40	15120	257 (2), 255, 327 (5)	50, 55 (2), 118
184	$D_{10} \cdot 2 \times 2$	40	15120	254 (2), 255, 329 (5)	51, 86 (2), 118
185	$S_3 \times S_3$	36	33600	262, 261, 260, 300 (3), 317 (3)	36, 75, 76, 92
186	$A_4 \times 3$	36	8400	311 (2), 314, 316, 326 (4)	69 (2), 77 (2), 120, 121, 123
187	$A_4 \times 3$	36	8400	315 (2), 312, 310, 326 (4)	77 (2), 122, 124, 125
188	$D_8 : 2^2$	32	18900	269, 284, 263, 285, 264, 286, 287	21 (2), 132
189	2^{1+4}	32	315	278 (10), 274 (5)	71 (6), 101 (10), 126 (15), 128 (10)
190	$Q_8 : 4$	32	9450	273, 288, 278	97 (2), 98, 126, 127, 130
191	$Q_8 : 2^2$	32	18900	269, 266, 275, 268, 277, 263, 276	99 (2), 132
192	$2 \times 4 : 2 : 2$	32	18900	270, 265 (2), 272, 267 (2), 271	100 (2), 105 (2), 106 (2), 108, 133
193	$Q_8 : 2^2$	32	9450	289, 279 (2), 280 (2), 290, 274	102 (2), 128, 137, 138
194	$D_8 \times 2 : 2$	32	1575	289 (6), 273	103 (4), 127 (6), 138 (3)
195	$D_8 : 4$	32	9450	273, 291, 292	104 (2), 127, 130, 139
196	$Q_8 \cdot 2^2$	32	9450	292, 281 (2), 280 (2), 291, 274	107 (2), 128, 137, 139
197	$Q_8 : 2^2$	32	9450	289, 264 (2), 291, 280 (2), 278	109, 127, 128, 131

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
198	2^{1+4}	32	3150	289 (3), 292 (3), 282 (2), 269 (6), 278	110, 127 (3), 128, 132 (3)
199	$Q_8 : 2^2$	32	9450	293, 263 (2), 288, 283 (2), 278	111, 126, 131, 132
200	$D_8 \cdot 2^2$	32	9450	292, 266, 290, 264, 278, 281, 279	112, 128, 130, 132
201	$D_8 \times 2 : 2$	32	3150	270, 293 (3), 294 (3)	113, 129, 133 (3), 134 (3)
202	$D_8 \cdot 4$	32	3150	291 (3), 290 (3), 278	114, 128, 130 (3), 131 (3)
203	$D_8 : 2^2$	32	18900	286, 275, 276, 287, 283, 282, 279	115, 132
204	$D_8 \cdot 2^2$	32	18900	285, 268, 277, 284, 283, 282, 281	116, 132
205	$2 \times 4 : 2 : 2$	32	4725	294 (4), 293, 274, 273	126, 129, 135, 136, 138, 139, 140
206	$8 : 2 \cdot 2$	32	4725	288 (2), 274	126, 137 (2), 140 (2)
207	$8 : 2 : 2$	32	9450	289, 288, 291	127, 131, 137
208	$Q_8 : 2^2$	32	9450	289, 268 (2), 288, 292, 287 (2)	127, 132, 137
209	$2 \times 8 \cdot 2$	32	9450	288, 291, 290	130, 131, 137
210	$4^2 \cdot 2$	32	4725	273, 290 (2)	130 (2), 135 (2), 138
211	$D_8 \cdot 4$	32	9450	275 (2), 284 (2), 292, 290, 288	130, 132, 137
212	$D_8 : 2^2$	32	9450	289, 293, 285 (2), 276 (2), 290	131, 132, 138
213	$8 : 2 : 2$	32	4725	293, 291 (2)	131 (2), 134 (2), 139
214	2^{1+4}	32	4725	272 (4), 286 (4), 277 (4), 292 (2), 293	132 (2), 133 (2), 139
215	$2 \times 4 : 2 : 2$	32	18900	272, 271, 294	133
216	$D_8 \times 2 \cdot 2$	32	9450	271 (2), 293	133, 134, 136
217	$S_3 \times 5$	30	10080	295, 324 (3), 352	44, 142
218	$15 : 2$	30	10080	295, 323, 354 (5)	69 (2), 88 (2), 142, 143, 144
219	D_{30}	30	10080	295, 325 (3), 352 (5)	142
220	D_{28}	28	14400	296, 298, 297, 359 (7)	117
221	3^{1+2}	27	2800	326 (4)	148, 149 (4)
222	5^2	25	2016	357 (3), 358 (3)	119, 150 (3), 151, 152 (3)
223	$S_3 \times 2^2$	24	25200	300 (2), 313, 299, 303 (2), 307, 330 (3)	21 (2), 51, 155
224	$S_3 \times 4$	24	25200	302, 301, 299, 327 (3)	23 (2), 50, 155
225	$S_3 \times 4$	24	25200	306, 309, 304, 329 (3)	47 (2), 86 (2), 116, 169

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
226	$S_3 \times 2^2$	24	8400	299 (3), 319 (3), 312, 328 (3)	49, 122, 155 (3)
227	$4 \cdot S_3$	24	12600	305, 331 (3)	52 (2), 98, 153, 156, 167
228	D_{24}	24	12600	305, 317 (2), 332 (3)	53 (2), 109, 156, 162, 168
229	$Q_8 \times 3$	24	12600	306 (2), 305, 333	54 (2), 110, 154, 156, 169
230	$2^2 : S_3$	24	8400	314, 334 (3), 351 (4)	70 (3), 97 (3), 120, 157 (3)
231	$2^2 : S_3$	24	50400	308, 335 (3), 355 (4)	85, 105
232	$A_4 \times 2$	24	12600	310, 328, 354 (4)	87 (2), 88 (2), 122 (2), 158, 166, 170
233	$2^2 : S_3$	24	25200	311, 336 (3), 355 (4)	89, 108, 123 (2), 161
234	$A_4 \times 2$	24	12600	311, 337, 349 (4)	90, 113, 159, 160, 161
235	$2^2 : S_3$	24	25200	312, 302, 313, 338 (3)	100 (2), 124, 155
236	$D_8 \times 3$	24	12600	305, 316 (2), 334	101, 120 (2), 153, 154, 162
237	$S_3 \times 2^2$	24	8400	318 (3), 317 (3), 316, 339 (3)	102 (3), 121, 162 (3)
238	$A_4 \times 2$	24	25200	314, 339, 353 (4)	103, 121, 157
239	$2^2 : S_3$	24	25200	314, 336 (3), 355 (4)	104, 105 (2), 123, 157
240	$2^2 : S_3$	24	50400	315, 338 (3), 355 (4)	105, 108, 124
241	$2^2 : S_3$	24	25200	316, 309, 317, 336 (3)	106 (2), 107, 123, 162
242	D_{24}	24	12600	304 (2), 305, 340 (3)	111, 153, 168, 169
243	$S_3 \times 4$	24	12600	309, 305, 318, 341 (3)	112, 162, 167, 169
244	24	24	12600	305, 342	114, 154, 167, 168
245	D_{24}	24	25200	306, 304, 318, 343 (3)	115, 169
246	$2^2 : S_3$	24	8400	310, 338 (3), 356 (4)	124 (3), 125, 170 (3)
247	$D_8 \times 3$	24	25200	301, 312, 307, 338	125, 155
248	$2^2 : S_3$	24	25200	319, 302, 307, 335 (3)	155
249	D_{24}	24	25200	301, 319, 313, 335 (3)	155
250	$Q_8 : 3$	24	3150	344, 354 (4)	165 (2), 172, 173, 174 (2), 175, 176 (2), 177 (2)
251	$7 : 3$	21	14400	348, 368 (7)	70, 178, 179, 180
252	D_{20}	20	30240	320, 322, 321, 360 (5)	40, 87, 94, 181
253	$D_{10} \cdot 2$	20	30240	321, 361 (5)	85 (2), 96, 181
254	$D_{10} \cdot 2$	20	10080	323, 362 (5)	89 (3), 143, 144 (3), 184 (3)
255	D_{20}	20	15120	324, 325, 323, 360 (5)	90, 94 (2), 142 (2), 182, 183, 184

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
256	$D_{10} \cdot 2$	20	30240	321, 361 (5)	95, 181
257	$D_{10} \cdot 2$	20	30240	325, 361 (5)	95, 96, 183
258	2×10	20	5040	324 (3), 363	146, 182
259	D_{20}	20	15120	324, 325 (2), 364 (5)	182
260	$S_3 \times 3$	18	33600	326, 351, 354 (3)	69, 120, 122, 148, 185
261	$S_3 \times 3$	18	33600	326, 356, 353 (3)	121, 125, 149, 185
262	$3 : S_3$	18	11200	326, 355 (9), 356 (3)	123 (3), 124 (3), 149, 185 (3)
263	D_{16}	16	18900	334, 331, 340	37 (2), 153 (2), 188, 191, 199
264	D_{16}	16	9450	334, 345, 346	38 (4), 188 (2), 197 (2), 200
265	$2 \times 4 : 2$	16	37800	328, 329, 327	118 (2), 158, 192
266	$Q_8 : 2$	16	3150	334, 342, 333	154 (4), 191 (6), 200 (3)
267	$D_8 \times 2$	16	37800	330, 328, 335 (2), 338 (2), 327	155 (2), 170, 192
268	$Q_8 : 2$	16	18900	332, 331, 333	156 (2), 191, 204, 208
269	$D_8 \times 2$	16	18900	332, 341, 336 (2), 339 (2), 334	157 (4), 162 (2), 188, 191, 198
270	2^4	16	1050	328 (12), 337 (3)	159 (4), 164 (4), 166 (4), 171, 192 (18), 201 (3)
271	$2 \times 4 : 2$	16	18900	337, 327 (2)	160 (2), 192, 215, 216
272	$D_8 \times 2$	16	18900	330, 343 (2), 329, 336 (2), 337	161 (2), 192, 214, 215
273	4^2	16	1575	347 (3)	163 (4), 190 (6), 194, 195 (6), 205 (3), 210 (3)
274	$Q_8 \times 2$	16	1575	347 (3), 344 (4)	165 (4), 189, 193 (6), 196 (6), 205 (3), 206 (3)
275	$8 : 2$	16	18900	341, 331, 342	167 (2), 191, 203, 211
276	D_{16}	16	18900	340, 342, 332	168 (2), 191, 203, 212
277	$D_8 : 2$	16	18900	343 (2), 329 (2), 340, 333, 341	169 (2), 191, 204, 214
278	$D_8 : 2$	16	3150	334 (3), 347 (3), 344	172, 189, 190 (3), 197 (3), 198, 199 (3), 200 (3), 202
279	$Q_8 : 2$	16	9450	346, 342, 344	173, 193 (2), 200, 203 (2)
280	$Q_8 : 2$	16	18900	346, 345, 344	174, 193, 196, 197
281	Q_{16}	16	9450	333, 345, 344	175, 196 (2), 200, 204 (2)

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
282	$D_8 : 2$	16	6300	332 (3), 341 (3), 344	176, 198, 203 (3), 204 (3)
283	$Q_8 : 2$	16	18900	340, 331, 344	177, 199, 203, 204
284	2×8	16	18900	345, 341, 331	188, 204, 211
285	D_{16}	16	18900	332, 340, 345	188, 204, 212
286	$D_8 \times 2$	16	18900	343 (2), 340, 330 (2), 341, 346	188, 203, 214
287	D_{16}	16	18900	346, 331, 332	188, 203, 208
288	$8 : 2$	16	9450	347, 331 (2)	190, 199, 206, 207, 208, 209, 211
289	$D_8 \times 2$	16	9450	339 (2), 332 (2), 346 (2), 347	193, 194, 197, 198, 207, 208, 212
290	2×8	16	9450	342, 345, 347	193, 200, 202, 209, 210, 211, 212
291	$8 : 2$	16	9450	347, 345 (2)	195, 196, 197, 202, 207, 209, 213
292	$D_8 : 2$	16	9450	346, 333, 341 (2), 336 (2), 347	195, 196, 198, 200, 208, 211, 214
293	$D_8 \times 2$	16	4725	337 (2), 340 (4), 347	199 (2), 201 (2), 205, 212 (2), 213, 214, 216 (2)
294	$2 \times 4 : 2$	16	9450	337, 347 (2)	201, 205 (2), 215 (2)
295	15	15	10080	358, 369	146 (2), 217, 218, 219
296	D_{14}	14	14400	348, 370 (7)	178, 220
297	D_{14}	14	14400	348, 371 (7)	179, 220
298	14	14	14400	348, 371	180, 220
299	D_{12}	12	25200	351, 349, 350, 360 (3)	37 (2), 41 (2), 90, 223, 224, 226
300	D_{12}	12	50400	351, 353, 355, 365 (3)	38, 89, 157 (2), 185 (2), 223
301	12	12	25200	349, 361	42 (2), 224, 247, 249
302	Q_{12}	12	25200	349, 361 (3)	43 (2), 160 (2), 224, 235, 248
303	D_{12}	12	50400	350, 353, 355, 359 (3)	85 (2), 223
304	D_{12}	12	25200	354, 352 (2), 360 (3)	87 (2), 142 (2), 177, 225, 242, 245
305	12	12	12600	354, 366	91 (2), 172, 227, 228, 229, 236, 242, 243, 244
306	12	12	25200	354, 362	93 (2), 143 (2), 176, 225, 229, 245
307	2×6	12	25200	349, 353 (2), 359	117 (4), 223, 247, 248
308	A_4	12	50400	364, 368 (4)	141, 164, 231

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
309	Q_{12}	12	12600	354, 362 (3)	144 (4), 158 (4), 175, 225 (2), 241 (2), 243
310	A_4	12	840	363, 369 (4)	145 (6), 146 (6), 187 (10), 232 (15), 246 (10)
311	A_4	12	4200	367, 368 (4)	147, 171, 186 (4), 233 (6), 234 (3)
312	2×6	12	8400	349 (3), 363	159 (2), 187, 226, 235 (3), 247 (3)
313	D_{12}	12	25200	355 (2), 349, 359 (3)	161 (2), 223, 235, 249
314	A_4	12	8400	367, 368 (4)	163 (3), 164 (2), 186, 230, 238 (3), 239 (3)
315	A_4	12	16800	363, 368 (4)	164, 171, 187, 240 (3)
316	2×6	12	8400	354 (3), 367	165 (3), 166 (2), 186, 236 (3), 237, 241 (3)
317	D_{12}	12	25200	354, 356 (2), 365 (3)	170 (2), 174, 185 (4), 228, 237, 241
318	D_{12}	12	12600	356 (2), 354, 365 (3)	173, 237 (2), 243, 245 (2)
319	D_{12}	12	25200	349, 350 (2), 364 (3)	226, 248, 249
320	10	10	30240	357, 372	71, 152, 252
321	D_{10}	10	30240	357, 370 (5)	141 (2), 151, 252, 253, 256
322	D_{10}	10	6048	357, 370 (5)	145, 150, 252 (5)
323	D_{10}	10	1008	358, 372 (5)	147 (5), 152 (6), 218 (10), 254 (10), 255 (15)
324	10	10	15120	358, 370	150 (2), 217 (2), 255, 258, 259
325	D_{10}	10	15120	358, 370 (5)	151 (2), 219 (2), 255, 257 (2), 259 (2)
326	3^2	9	11200	368 (3), 369	186 (3), 187 (3), 221, 260 (3), 261 (3), 262
327	2×4	8	37800	361 (2), 360	181 (4), 183 (2), 224 (2), 265, 267, 271
328	2^3	8	12600	360 (3), 364 (3), 363	182 (2), 226 (2), 232, 265 (3), 267 (3), 270
329	2×4	8	18900	360, 362 (2)	184 (4), 225 (4), 265 (2), 272, 277 (2)
330	2^3	8	18900	359 (4), 365 (2), 360	223 (4), 267 (2), 272, 286 (2)
331	8	8	18900	366	227 (2), 263, 268, 275, 283, 284, 287, 288

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
332	D_8	8	18900	365 (2), 366	228 (2), 268, 269, 276, 282, 285, 287, 289
333	Q_8	8	3150	366, 362 (2)	229 (4), 266, 268 (6), 277 (6), 281 (3), 292 (3)
334	D_8	8	3150	367 (2), 366	230 (8), 236 (4), 263 (6), 264 (3), 266, 269 (6), 278 (3)
335	D_8	8	75600	364, 359, 361	231 (2), 248, 249, 267
336	D_8	8	18900	365, 362, 367	233 (4), 239 (4), 241 (4), 269 (2), 272 (2), 292
337	2^3	8	3150	360 (6), 367	234 (4), 270, 271 (6), 272 (6), 293 (3), 294 (3)
338	D_8	8	25200	359, 363, 361	235 (3), 240 (6), 246, 247, 267 (3)
339	2^3	8	6300	365 (6), 367	237 (4), 238 (4), 269 (6), 289 (3)
340	D_8	8	18900	360 (2), 366	242 (2), 263, 276, 277, 283, 285, 286, 293
341	2×4	8	18900	365, 362, 366	243 (2), 269, 275, 277, 282, 284, 286, 292
342	8	8	3150	366	244 (4), 266, 275 (6), 276 (6), 279 (3), 290 (3)
343	D_8	8	37800	360, 362, 365	245 (2), 272, 277, 286
344	Q_8	8	3150	366 (3)	250, 274 (2), 278, 279 (3), 280 (6), 281 (3), 282 (2), 283 (6)
345	8	8	9450	366	264, 280 (2), 281, 284 (2), 285 (2), 290, 291 (2)
346	D_8	8	9450	365 (2), 366	264, 279, 280 (2), 286 (2), 287 (2), 289 (2), 292
347	2×4	8	4725	366 (2), 367	273, 274, 278 (2), 288 (2), 289 (2), 290 (2), 291 (2), 292 (2), 293, 294 (4)

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
348	7	7	14400	373	251, 296, 297, 298
349	6	6	25200	368, 370	72 (2), 178 (4), 234 (2), 299, 301, 302, 307, 312, 313, 319
350	S_3	6	25200	368, 370 (3)	73 (2), 141 (4), 299, 303 (2), 319 (2)
351	S_3	6	8400	368, 372 (3)	74 (6), 147, 230 (4), 260 (4), 299 (3), 300 (6)
352	S_3	6	10080	369, 370 (3)	145, 217, 219 (5), 304 (5)
353	6	6	50400	368, 371	179 (2), 180 (2), 238 (2), 261 (2), 300, 303, 307
354	6	6	12600	369, 372	218 (4), 232 (4), 250, 260 (8), 304 (2), 305, 306 (2), 309, 316 (2), 317 (2), 318
355	S_3	6	50400	368, 371 (3)	231 (4), 233 (2), 239 (2), 240 (4), 262 (2), 300, 303, 313
356	S_3	6	8400	369, 371 (3)	246 (4), 261 (4), 262 (4), 317 (6), 318 (3)
357	5	5	6048	373	222, 320 (5), 321 (5), 322
358	5	5	1008	373	222 (6), 295 (10), 323, 324 (15), 325 (15)
359	2^2	4	25200	371 (2), 370	220 (4), 303 (6), 307, 313 (3), 330 (3), 335 (3), 338
360	2^2	4	18900	370 (2), 372	252 (8), 255 (4), 299 (4), 304 (4), 327 (2), 328 (2), 329, 330, 337, 340 (2), 343 (2)
361	4	4	25200	370	253 (6), 256 (6), 257 (6), 301, 302 (3), 327 (3), 335 (3), 338
362	4	4	6300	372	254 (8), 306 (4), 309 (6), 329 (6), 333, 336 (3), 341 (3), 343 (6)

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
363	2^2	4	840	370 (3)	258 (6), 310, 312 (10), 315 (20), 328 (15), 338 (30)
364	2^2	4	12600	370 (3)	259 (6), 308 (4), 319 (6), 328 (3), 335 (6)
365	2^2	4	18900	371 (2), 372	300 (8), 317 (4), 318 (2), 330 (2), 332 (2), 336, 339 (2), 341, 343 (2), 346
366	4	4	3150	372	305 (4), 331 (6), 332 (6), 333, 334, 340 (6), 341 (6), 342, 344 (3), 345 (3), 346 (3), 347 (3)
367	2^2	4	525	372 (3)	311 (8), 314 (16), 316 (16), 334 (12), 336 (36), 337 (6), 339 (12), 347 (9)
368	3	3	8400	373	119 (6), 251 (12), 308 (24), 311 (2), 314 (4), 315 (8), 326 (4), 349 (3), 350 (3), 351, 353 (6), 355 (6)
369	3	3	280	373	295 (36), 310 (12), 326 (40), 352 (36), 354 (45), 356 (30)
370	2	2	2520	373	296 (40), 321 (60), 322 (12), 324 (6), 325 (30), 349 (10), 350 (30), 352 (12), 359 (10), 360 (15), 361 (10), 363, 364 (15)
371	2	2	1800	373	297 (56), 298 (8), 353 (28), 355 (84), 356 (14), 359 (28), 365 (21)
372	2	2	315	373	320 (96), 323 (16), 351 (80), 354 (40), 360 (60), 362 (20), 365 (60), 366 (10), 367 (5)

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
373	1	1	1		348 (14400), 357 (6048), 358 (1008), 368 (8400), 369 (280), 370 (2520), 371 (1800), 372 (315)

TABLE 1. Subgroup lattice of $J_2 : 2$

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