

## 4. ORDERS OF ELEMENTS AND CLASS EQUATIONS

Non-cyclic groups of order up to 100 (except for orders 64 and 96).

The number and name of each group is given. The columns headed with numbers give the number of elements of each order. #CC denotes the number of conjugacy classes and the class equation gives the order of the group expressed as a sum of conjugacy class sizes, with  $m*n$  representing  $n$  classes of size  $m$ .

No	NAME	2	#CC	CLASS EQUATION
4.2	$2^2$	3	4	$4 = 1*4$

No	NAME	2	3	#CC	CLASS EQUATION
6.2	$D_6 = S_3$	3	2	3	$6 = 1 + 2 + 3$

No	NAME	2	4	#CC	CLASS EQUATION
8.2	$4 \times 2$	3	4	8	$8 = 1*8$
8.3	$2^3$	7		8	$8 = 1*8$
8.4	$D_8$	5	2	5	$8 = 1*2 + 2*3$
8.5	$Q_8$	1	6	5	$8 = 1*2 + 2*3$

No	NAME	3	#CC	CLASS EQUATION
9.2	$3^2$	8	9	$9 = 1*9$

No	NAME	2	5	#CC	CLASS EQUATION
10.2	$D_{10}$	5	4	4	$10 = 1 + 2*2 + 5$

No	NAME	2	3	4	6	#CC	CLASS EQUATION
12.2	$6 \times 2$	3	2		6	12	$12 = 1*12$
12.3	$D_6 \times 2$	7	2		2	6	$12 = 1*2 + 2*2 + 3*2$
12.4	$D_{3,4}$	1	2	6	2	6	$12 = 1*2 + 2*2 + 3*2$
12.5	$A_4$	3	8			5	$12 = 1 + 3 + 4*2$

No	NAME	2	7	#CC	CLASS EQUATION
14.2	$D_{14}$	7	6	5	$14 = 1 + 2*3 + 7$

No	NAME	2	4	8	#CC	CLASS EQUATION
16.02	$8 \times 2$	3	4	8	16	$16 = 1*16$
16.03	$4^2$	3	12		16	$16 = 1*16$
16.04	$4 \times 2^2$	7	8		16	$16 = 1*16$
16.05	$2^4$	15			16	$16 = 1*16$
16.06	$D_8 \times 2$	11	4		10	$16 = 1*4 + 2*6$
16.07	$Q_8 \times 2$	3	12		10	$16 = 1*4 + 2*6$
16.08		7	8		10	$16 = 1*4 + 2*6$
16.09		7	8		10	$16 = 1*4 + 2*6$
16.10	$D_{4,4}$	3	12		10	$16 = 1*4 + 2*6$
16.11	$M_{8,2}^{(5)}$	3	4	8	10	$16 = 1*4 + 2*6$
16.12	$D_{16}$	9	2	4	7	$16 = 1*2 + 2*3 + 4*2$
16.13	$M_{8,2}^{(3)}$	5	6	4	7	$16 = 1*2 + 2*3 + 4*2$
16.14	$Q_{16}$	1	10	4	7	$16 = 1*2 + 2*3 + 4*2$

No	NAME	2	3	6	9	#CC	CLASS EQUATION
18.2	$6 \times 3$	1	8	8		18	$18 = 1*18$
18.3	$D_6 \times 3$	3	8	6		9	$18 = 1*3 + 2*3 + 3*2$
18.4		9	8			6	$18 = 1 + 2*4 + 9$
18.5	$D_{18}$	9	2		6	6	$18 = 1 + 2*4 + 9$

No	NAME	2	4	5	10	#CC	CLASS EQUATION
20.2	$10 \times 2$	3		4	12	20	$20 = 1*20$
20.3	$D_{10} \times 2$	11		4	4	8	$20 = 1*2 + 2*4 + 5*2$
20.4	$D_{5,4}$	1	10	4	4	8	$20 = 1*2 + 2*4 + 5*2$
20.5	$M_{5,4}^{(2)}$	5	10	4		5	$20 = 1 + 4 + 5*3$

No	NAME	3	7	#CC	CLASS EQUATION
21.2	$M_{7,3}^{(2)}$	14	6	5	$21 = 1 + 3*2 + 7*2$

No	NAME	2	11	#CC	CLASS EQUATION
22.2	$D_{22}$	11	10	7	$22 = 1 + 2*5 + 11$

No	NAME	2	3	4	6	8	12	#CC	CLASS EQUATION
24.02	$12 \times 2$	3	2	4	6		8	24	$24 = 1*24$
24.03	$6 \times 2^2$	7	2		14			24	$24 = 1*24$
24.04	$D_8 \times 3$	5	2	2	10		4	15	$24 = 1*6 + 2*9$
24.05	$Q_8 \times 3$	1	2	6	2		12	15	$24 = 1*6 + 2*9$
24.06	$D_6 \times 2^2$	15	2		6			12	$24 = 1*4 + 2*4 + 3*4$
24.07	$D_6 \times 4$	7	2	8	2		4	12	$24 = 1*4 + 2*4 + 3*4$
24.08	$D_{3,4} \times 2$	3	2	12	6			12	$24 = 1*4 + 2*4 + 3*4$
24.09	$D_{3,8}$	1	2	2	2	12	4	12	$24 = 1*4 + 2*4 + 3*4$
24.10	$A_4 \times 2$	7	8		8			8	$24 = 1*2 + 3*2 + 4*4$
24.11		9	2	6	6			9	$24 = 1*2 + 2*5 + 6*2$
24.12	$D_{24}$	13	2	2	2		4	9	$24 = 1*2 + 2*5 + 6*2$
24.13	$Q_{24}$	1	2	14	2		4	9	$24 = 1*2 + 2*5 + 6*2$
24.14	$SL_{2,3}$	1	8	6	8			7	$24 = 1*2 + 4*4 + 6$
24.15	$S_4$	9	8	6				5	$24 = 1 + 3 + 6*2 + 8$

No	NAME	5	#CC	CLASS EQUATION
25.2	$5^2$	24	25	$25 = 1*25$

No	NAME	2	13	#CC	CLASS EQUATION
26.2	$D_{26}$	13	12	8	$26 = 1 + 2*6 + 13$

No	NAME	3	9	#CC	CLASS EQUATION
27.2	$9 \times 3$	8	18	27	$27 = 1*27$
27.3	$3^3$	26		27	$27 = 1*27$
27.4		26		11	$27 = 1*3 + 3*8$
27.5	$M_{9,3}^{(4)}$	8	18	11	$27 = 1*3 + 3*8$

No	NAME	2	4	7	14	#CC	CLASS EQUATION
28.2	$14 \times 2$	3		6	18	28	$28 = 1*28$
28.3	$D_{14} \times 2$	15		6	6	10	$28 = 1*2 + 2*6 + 7*2$
28.4	$D_{7,4}$	1	14	6	6	10	$28 = 1*2 + 2*6 + 7*2$

No	NAME	2	3	5	6	10	15	#CC	CLASS EQUATION
30.2	$D_6 \times 5$	3	2	4		12	8	15	$30 = 1*5 + 2*5 + 3*5$
30.3	$D_{10} \times 3$	5	2	4	10		8	12	$30 = 1*3 + 2*6 + 5*3$
30.4	$D_{30}$	15	2	4			8	9	$30 = 1 + 2*7 + 15$

No	NAME	2	4	8	16	#CC	CLASS EQUATION
32.02	$16 \times 2$	3	4	8	16	32	$32 = 1*32$
32.03	$8 \times 4$	3	12	16		32	$32 = 1*32$
32.04	$8 \times 2^2$	7	8	16		32	$32 = 1*32$
32.05	$4^2 \times 2$	7	24			32	$32 = 1*32$
32.06	$4 \times 2^3$	15	16			32	$32 = 1*32$
32.07	$2^5$	31				32	$32 = 1*32$
32.08	$\mathbf{D}_8 \times 2^2$	23	8			20	$32 = 1*8 + 2*12$
32.09	$\mathbf{Q}_8 \times 2^2$	7	24			20	$32 = 1*8 + 2*12$
32.10	$16.08 \times 2$	15	16			20	$32 = 1*8 + 2*12$
32.11	$16.09 \times 2$	15	16			20	$32 = 1*8 + 2*12$
32.12	$\mathbf{D}_{4,4} \times 2$	7	24			20	$32 = 1*8 + 2*12$
32.13	$\mathbf{M}_{8,2}^{(5)} \times 2$	7	8	16		20	$32 = 1*8 + 2*12$
32.14	$\mathbf{D}_8 \times 4$	11	20			20	$32 = 1*8 + 2*12$
32.15	$\mathbf{Q}_8 \times 4$	3	28			20	$32 = 1*8 + 2*12$
32.16		7	24			20	$32 = 1*8 + 2*12$
32.17		7	8	16		20	$32 = 1*8 + 2*12$
32.18		7	24			20	$32 = 1*8 + 2*12$
32.19	$\mathbf{M}_{8,4}^{(5)}$	3	12	16		20	$32 = 1*8 + 2*12$
32.20		7	8	16		20	$32 = 1*8 + 2*12$
32.21	$\mathbf{D}_{4,8}$	3	12	16		20	$32 = 1*8 + 2*12$
32.22	$\mathbf{M}_{16,2}^{(9)}$	3	4	8	16	20	$32 = 1*8 + 2*12$
32.23	$\mathbf{D}_{16} \times 2$	19	4	8		14	$32 = 1*4 + 2*6 + 4*4$
32.24	$\mathbf{M}_{8,2}^{(3)} \times 2$	11	12	8		14	$32 = 1*4 + 2*6 + 4*4$
32.25	$\mathbf{Q}_{16} \times 2$	3	20	8		14	$32 = 1*4 + 2*6 + 4*4$
32.26		11	12	8		14	$32 = 1*4 + 2*6 + 4*4$
32.27		11	12	8		14	$32 = 1*4 + 2*6 + 4*4$
32.28		3	20	8		14	$32 = 1*4 + 2*6 + 4*4$
32.29	$\mathbf{D}_{8,4}$	3	20	8		14	$32 = 1*4 + 2*6 + 4*4$
32.30	$\mathbf{M}_{8,4}^{(3)}$	3	20	8		14	$32 = 1*4 + 2*6 + 4*4$
32.31		7	16	8		14	$32 = 1*4 + 2*6 + 4*4$
32.32	$\mathbf{Q}_{32}$	3	4	24		24	$32 = 1*4 + 2*6 + 4*4$
32.33		19	12			14	$32 = 1*4 + 2*6 + 4*4$
32.34		19	12			14	$32 = 1*4 + 2*6 + 4*4$

No	NAME	2	4	8	16	#CC	CLASS EQUATION
32.35		3	28			14	$32 = 1*4 + 2*6 + 4*4$
32.36		15	16			14	$32 = 1*4 + 2*6 + 4*4$
32.37		7	24			14	$32 = 1*4 + 2*6 + 4*4$
32.38		11	20			14	$32 = 1*4 + 2*6 + 4*4$
32.39		11	20			14	$32 = 1*4 + 2*6 + 4*4$
32.40		3	28			14	$32 = 1*4 + 2*6 + 4*4$
32.41		7	24			14	$32 = 1*4 + 2*6 + 4*4$
32.42		19	12			17	$32 = 1*2 + 2*15$
32.43		11	20			17	$32 = 1*2 + 2*15$
32.44		15	8	8		11	$32 = 1*2 + 2*3 + 4*6$
32.45		7	16	8		11	$32 = 1*2 + 2*3 + 4*6$
32.46		11	20			11	$32 = 1*2 + 2*3 + 4*6$
32.47		11	4	16		11	$32 = 1*2 + 2*3 + 4*6$
32.48		3	12	16		11	$32 = 1*2 + 2*3 + 4*6$
32.49	$D_{32}$	17	2	4	8	11	$32 = 1*2 + 2*7 + 8*2$
32.50	$M_{16,2}^{(7)}$	9	10	4	8	11	$32 = 1*2 + 2*7 + 8*2$
32.51		1	18	4	8	11	$32 = 1*2 + 2*7 + 8*2$

No	NAME	2	17	#CC	CLASS EQUATION
34.2	$D_{34}$	17	16	10	$34 = 1 + 2*8 + 17$

No	NAME	2	3	4	6	9	12	18	#CC	CLASS EQN
36.02	$18 \times 2$	3	2		6	6		18	36	$36 = 1*36$
36.03	$12 \times 3$	8	2	8		16			36	$36 = 1*36$
36.04	$6^2$	3	8		24				36	$36 = 1*36$
36.05	$D_6 \times 6$	7	8		20				18	$36 = 1*6 + 2*6 + 3*6$
36.06	$D_{3,4} \times 3$	1	8	6	8		12		18	$36 = 1*6 + 2*6 + 3*6$
36.07	$A_4 \times 3$	3	26		6				12	$36 = 1*3 + 3*3 + 4*6$
36.08		3	2		6	24			12	$36 = 1*3 + 3*3 + 4*6$
36.09	$18.4 \times 2$	19	8		8				12	$36 = 1*2 + 2*8 + 9*2$
36.10		1	8	18	8				12	$36 = 1*2 + 2*8 + 9*2$
36.11	$D_{18} \times 2$	19	2		2	6		6	12	$36 = 1*2 + 2*8 + 9*2$
36.12	$D_{9,4}$	1	2	18	2	6		6	12	$36 = 1*2 + 2*8 + 9*2$
36.13	$D_6 \times D_6$	15	8		12				9	$36 = 1 + 2*2 + 3*2 + 4 + 6$
36.14		9	8	18					6	$1 + 4*2 + 9*3$

No	NAME	PRESENTATION	2	19	#CC	CLASS EQUATION
38.2	$D_{38}$	$A^{19}, B^2, BA=A^{-1}B$	19	18	11	$38 = 1 + 4*2 + 9*3$

No	NAME	3	13	#CC	CLASS EQUATION
39.2	$M_{13,3}^{(3)}$	26	12	7	$39 = 1 + 3*4 + 13*2$

No	NAME	2	4	5	8	10	20	#CC	CLASS EQUATION
40.02	$20 \times 2$	3	4	4		12	16	40	$40 = 1*40$
40.03	$10 \times 2^2$	7		4		20		40	$40 = 1*40$
40.04	$D_8 \times 5$	5	2	4		20	8	25	$40 = 1*10 + 2*15$
40.05	$Q_8 \times 5$	1	6	4		4	24	25	$40 = 1*10 + 2*15$
40.06	$D_{10} \times 2^2$	23		4		12		16	$40 = 1*4 + 2*8 + 5*4$
40.07	$D_{10} \times 4$	11	12	4		4	8	16	$40 = 1*4 + 2*8 + 5*4$
40.08	$D_{5,4} \times 2$	3	20	4		12		16	$40 = 1*4 + 2*8 + 5*4$
40.09	$D_{5,8}$	1	2		20	4	8	16	$40 = 1*4 + 2*8 + 5*4$
40.10	$M_{5,4}^{(3)} \times 2$	11	20	4		4		10	$40 = 1*2 + 4*2 + 5*6$
40.11	$M_{5,8}^{(3)}$	1	10	4	20	4		10	$40 = 1*2 + 4*2 + 5*6$
40.12		13	10	4		12		13	$40 = 1*2 + 2*9 + 10*2$
40.13	$D_{40}$	21	2	4		4	8	13	$40 = 1*2 + 2*9 + 10*2$
40.14	$Q_{40}$	1	22	4		4	8	13	$40 = 1*2 + 2*9 + 10*2$

No	NAME	2	3	6	7	14	21	#CC	CLASS EQUATION
42.2	$D_6 \times 7$	3	2		6	18	12	21	$42 = 1*7 + 2*7 + 3*7$
42.3	$D_{14} \times 3$	7	2	14	6		12	15	$42 = 1*3 + 2*9 + 7*3$
42.4	$M_{7,3}^{(2)} \times 2$	1	14	14	6	6		10	$42 = 1*2 + 3*4 + 7*4$
42.5	$M_{7,6}^{(3)}$	7	14	14	6			7	$42 = 1 + 6 + 7*5$
42.6	$D_{42}$	21	2		6		12	12	$42 = 1 + 2*10 + 21$

No	NAME	2	4	11	22	#CC	CLASS EQUATION
44.2	$22 \times 2$	3		10	30	44	$44 = 1*44$
44.3	$D_{22} \times 2$	23		10	10	14	$44 = 1*2 + 2*10 + 11*2$
44.4	$D_{11,4}$	1	22	10	10	14	$44 = 1*2 + 2*10 + 11*2$

No	NAME	3	5	9	15	#CC	CLASS EQUATION
45.2	$15 \times 3$	8	4		32	45	$45 = 1*45$

No	NAME	2	23	#CC	CLASS EQUATION
46.2	$D_{46}$	23	22	13	$46 = 1 + 2*11 + 23$

No	NAME	2	3	4	6	8	12	16	24	#CC	CLASS EQN
48.02	$24 \times 2$	3	2	4	6	8	8		16	48	$48 = 1*48$
48.03	$12 \times 4$	3	2	12	6		24			48	$48 = 1*48$
48.04	$12 \times 2^2$	7	2	8	14		16			48	$48 = 1*48$
48.05	$6 \times 2^3$	15	2		30					48	$48 = 1*48$
48.06	$\mathbf{D}_8 \times 6$	11	2	4	22		12			30	$48 = 1*12 + 2*18$
48.07	$\mathbf{Q}_8 \times 6$	3	2	12	6		24			30	$48 = 1*12 + 2*18$
48.08	$16.08 \times 3$	7	2	8	14		16			30	$48 = 1*12 + 2*18$
48.09	$16.09 \times 3$	7	2	8	14		16			30	$48 = 1*12 + 2*18$
48.10	$\mathbf{D}_{4,4} \times 3$	3	2	12	6		24			30	$48 = 1*12 + 2*18$
48.11	$\mathbf{M}_{8,2}^{(5)} \times 3$	3	2	4	6	8	8		16	30	$48 = 1*12 + 2*18$
48.12	$\mathbf{D}_{16} \times 3$	9	2	2	18	4	4		8	21	$48 = 1*6 + 2*9 + 4*6$
48.13	$\mathbf{M}_{8,2}^{(3)} \times 3$	5	2	6	10	4	12		8	21	$48 = 1*6 + 2*9 + 4*6$
48.14	$\mathbf{Q}_{16} \times 3$	1	2	10	2	4	20		8	21	$48 = 1*6 + 2*9 + 4*6$
48.15	$\mathbf{D}_6 \times 2^3$	31	2		14					24	$48 = 1*8 + 2*8 + 3*8$
48.16	$\mathbf{D}_6 \times 4 \times 2$	15	2	16	6		8			24	$48 = 1*8 + 2*8 + 3*8$
48.17	$\mathbf{D}_{3,4} \times 2^2$	7	2	24	14					24	$48 = 1*8 + 2*8 + 3*8$
48.18	$\mathbf{D}_{3,4} \times 4$	3	2	28	6		8			24	$48 = 1*8 + 2*8 + 3*8$
48.19	$\mathbf{D}_6 \times 8$	7	2	8	2	16	4		24	24	$48 = 1*8 + 2*8 + 3*8$
48.20	$\mathbf{D}_{3,8} \times 2$	3	2	4	6	24	8			24	$48 = 1*8 + 2*8 + 3*8$
48.21	$\mathbf{D}_{3,16}$	1	2	2	2	4	4	24	8	24	$48 = 1*8 + 2*8 + 3*8$
48.22	$\mathbf{A}_4 \times 2^2$	15	8		24					16	$48 = 1*4 + 3*4 + 4*8$
48.23	$\mathbf{A}_4 \times 4$	7	8	8	8		16			16	$48 = 1*4 + 3*4 + 4*8$
48.24	$24.11 \times 2$	19	2	4	6		8			18	$48 = 1*4 + 2*10 + 6*4$
48.25	$\mathbf{D}_{24} \times 2$	27	2	4	6		8			18	$48 = 1*4 + 2*10 + 6*4$
48.26	$\mathbf{Q}_{24} \times 2$	3	2	28	6	8				18	$48 = 1*4 + 2*10 + 6*4$
48.27		7	2	24	14					18	$48 = 1*4 + 2*10 + 6*4$
48.28		15	2	16	6		8			18	$48 = 1*4 + 2*10 + 6*4$
48.29		3	2	28	6		8			18	$48 = 1*4 + 2*10 + 6*4$
48.30	$\mathbf{D}_{12,4}$	3	2	28	6		8			18	$48 = 1*4 + 2*10 + 6*4$
48.31		15	2	16	6		8			18	$48 = 1*4 + 2*10 + 6*4$
48.32		3	2	4	6	24	8			18	$48 = 1*4 + 2*10 + 6*4$
48.33	$\mathbf{M}_{24,2}^{(5)}$	7	2	8	2	16	4		8	18	$48 = 1*4 + 2*10 + 6*4$
48.34	$\mathbf{SL}_{2,3} \times 2$	3	8	12	24					14	$48 = 1*4 + 4*8 + 6*2$

No	NAME	2	3	4	6	8	12	16	24	#CC	CLASS EQN
48.35		7	8	8	8		16			14	$48 = 1*4 + 4*8 + 6*2$
48.36	$S_4 \times 2$	19	8	12	8					10	$48 = 1*2 + 3*2 + 6*4 + 8*2$
48.37		7	8	24	8					10	$48 = 1*2 + 3*2 + 6*4 + 8*2$
48.38	$D_8 \times D_6$	23	2	8	10		4			15	$48 = 1*2 + 2*5 + 3*2 + 4*3$
48.39	$Q_8 \times D_6$	7	2	24	2		12			15	$48 = 1*2 + 2*5 + 3*2 + 4*3$
48.40		11	2	20	10		4			15	$48 = 1*2 + 2*5 + 3*2 + 4*3$
48.41		19	2	12	2		12			15	$48 = 1*2 + 2*5 + 3*2 + 4*3$
48.42	$D_{48}$	25	2	2	2	4	4		8	15	$48 = 1*2 + 2*11 + 12*2$
48.43	$M_{24,2}^{(11)}$	13	2	14	2	4	4		8	15	$48 = 1*2 + 2*11 + 12*2$
48.44	$Q_{48}$	1	2	26	2	4	4		8	15	$48 = 1*2 + 2*11 + 12*2$
48.45		17	2	2	10	12	4			12	$48 = 1*2 + 2*3 + 4*4 + 6*2$
48.46		5	2	14	10	12	4			12	$48 = 1*2 + 2*3 + 4*4 + 6*2$
48.47		13	2	6	2	12	12			12	$48 = 1*2 + 2*3 + 4*4 + 6*2$
48.48		1	2	18	2	12	12			12	$48 = 1*2 + 2*3 + 4*4 + 6*2$
48.49	$GL_{2,3}$	13	8	6	8	12	8				$48 = 1*2 + 6*3 + 8*2 + 12$
48.50		1	8	18	8	12	8				$48 = 1*2 + 6*3 + 8*2 + 12$
48.51		15	32				8				$48 = 1 + 3*5 + 16*2$
48.52		3	32	12			8				$48 = 1 + 3*5 + 16*2$

No	NAME	7	#CC	CLASS EQUATION
49.2	$7^2$	48	49	$49 = 1*49$

No	NAME	2	5	10	25	#CC	CLASS EQUATION
50.2	$10 \times 5$	1	24	24		50	$50 = 1*50$
50.3	$D_{10} \times 5$	5	24	20		20	$50 = 1*5 + 2*10 + 5*5$
50.4		25	24			14	$50 = 1 + 3*5 + 16*2$
50.5	$D_{50}$	25	4		20	14	$50 = 1 + 3*5 + 16*2$

No	NAME	2	4	13	26	#CC	CLASS EQUATION
52.2	$26 \times 2$	3		12	36	52	$52 = 1*52$
52.3	$D_{52}$	27		12	12	16	$52 = 1*2 + 2*12 + 13*2$
52.4	$D_{13,4}$	1	26	12	12	16	$52 = 1*2 + 2*12 + 13*2$
52.5	$M_{13,4}^{(5)}$	13	26	12		7	$52 = 1 + 4*3 + 13*3$

No	NAME	2	3	6	9	18	27	#CC	CLASS EQUATION
54.02	$18 \times 3$	1	8	8	18	18		54	$54 = 1*54$
54.03	$6 \times 3^2$	1	26	26				54	$54 = 1*54$
54.04	$27.4 \times 2$	1	26	26				28	$54 = 1*2 + 2*26$
54.05	$M_{9,3}^{(4)} \times 2$	1	8	8	18	18		22	$54 = 1*6 + 3*16$
54.06	$D_6 \times 3^2$	3	24	26				27	$54 = 1*9 + 2*9 + 3*9$
54.07	$D_6 \times 9$	3	8	6	18	18		27	$54 = 1*9 + 2*9 + 3*9$
54.08	$18.4 \times 3$	9	26	18				18	$54 = 1*3 + 2*12 + 9*3$
54.09	$D_{18} \times 3$	9	8	18	18			18	$54 = 1*3 + 2*12 + 9*3$
54.10		9	26	18				10	$54 = 1*3 + 6*4 + 9*3$
54.11		9	26	18				10	$54 = 1 + 2 + 3*2 + 6*3 + 9$
54.12	$M_{9,6}^{(5)}$	9	8	18	18			10	$54 = 1 + 2 + 3*2 + 6*3 + 9$
54.13		27	26					15	$54 = 1 + 2*13 + 27$
54.14		27	8		18			15	$54 = 1 + 2*13 + 27$
54.15	$D_{54}$	27	2		6		18	15	$54 = 1 + 2*13 + 27$

No	NAME	5	11	#CC	CLASS EQUATION
55.2	$M_{11,5}^{(3)}$	44	10	7	$55 = 1 + 5*2 + 11*4$

No	NAME	2	4	7	8	14	28	#CC	CLASS EQUATION
56.02	$28 \times 2$	3	4	6		18	24	56	$56 = 1*56$
56.03	$14 \times 2^2$	7		6		42		56	$56 = 1*56$
56.04	$D_8 \times 7$	5	2	6		30	12	35	$56 = 1*14 + 2*21$
56.05	$Q_8 \times 7$	1	6	6		6	36	35	$56 = 1*14 + 2*21$
56.06	$D_{14} \times 2^2$	31		6		18		20	$56 = 1*4 + 2*12 + 7*4$
56.07	$D_{14} \times 4$	15	16	6		6	12	20	$56 = 1*4 + 2*12 + 7*4$
56.08	$D_{7,4} \times 2$	3	28	6		18		20	$56 = 1*4 + 2*12 + 7*4$
56.09	$D_{7,8}$	1	2	6	28	6	12	20	$56 = 1*4 + 2*12 + 7*4$
56.10		17	14	6		18		17	$56 = 1*2 + 2*13 + 14*2$
56.11	$D_{56}$	29	2	6		6	12	17	$56 = 1*2 + 2*13 + 14*2$
56.12	$Q_{56}$	1	30	6		6	12	17	$56 = 1*2 + 2*13 + 14*2$
56.13		7		48				8	$56 = 1 + 7 + 8*6$

No	NAME	3	19	#CC	CLASS EQUATION
57.2	$M_{19,3}^{(7)}$	38	18	9	$57 = 1 + 3*6 + 19*2$

No	NAME	2	29	#CC	CLASS EQUATION
58.2	$D_{58}$	29	28	16	$58 = 1 + 2*14 + 29$

No	NAME	2	3	4	5	6	10	12	15	20	30	#CC	CLASS EQUATION
60.02	$30 \times 2$	3	2		4	6	12		8		24	60	$60 = 1*60$
60.03	$D_6 \times 10$	7	2		4	2	28		8		8	30	$60 = 1*10 + 2*10 + 3*10$
60.04	$D_{3,4} \times 5$	1	2	6	4	2	4		8	24	8	30	$60 = 1*10 + 2*10 + 3*10$
60.05	$A_4 \times 5$	3	8		4		12		32			20	$60 = 1*5 + 3*5 + 4*10$
60.06	$D_{10} \times 6$	11	2		4	22	4		8		8	24	$60 = 1*6 + 2*12 + 5*6$
60.07	$D_{5,4} \times 3$	1	2	10	4	2	4	20	8		8	24	$60 = 1*6 + 2*12 + 5*6$
60.08	$M_{5,4}^{(2)} \times 3$	5	2	10	4	10		20	8			15	$60 = 1*3 + 4*3 + 5*9$
60.09	$D_{30} \times 2$	31	2		4	2	4		8		8	18	$60 = 1*2 + 2*14 + 15*2$
60.10	$D_{15,4}$	1	2	30	4	2	4		8		8	18	$60 = 1*2 + 2*14 + 15*2$
60.11	$D_{10} \times D_6$	23	2		4	10	12		8			12	$60 = 1 + 2*3 + 3 + 4*2 + 5$
60.12	$M_{15,4}^{(2)}$	5	2	30	4	10			8			9	$1 + 2 + 4*3 + 5 + 10$
60.13	$A_5$	15	20		24							5	$60 = 1 + 12*2 + 15 + 20$

No	NAME	2	31	#CC	CLASS EQUATION
62.2	$D_{62}$	31	30	17	$62 = 1 + 2*15 + 31$

No	NAME	3	7	9	21	#CC	CLASS EQUATION
63.2	$21 \times 3$	8	6		48	63	$63 = 1*63$
63.3	$M_{7,3}^{(4)} \times 3$	44	6		12	15	$63 = 1*3 + 3*6 + 7*6$
63.4	$M_{7,9}^{(2)}$	2	6	42	12	15	$63 = 1*3 + 3*6 + 7*6$

There are 267 groups of order 64, of which 11 are abelian.

No	NAME	2	3	6	11	22	33	#CC	CLASS EQUATION
66.2	$D_6 \times 11$	3	2		10	30	20	33	$66 = 1*11 + 2*11 + 3*11$
66.3	$D_{22} \times 3$	11	2	22	10		20	21	$66 = 1*3 + 2*15 + 11*3$
66.4	$D_{66}$	33	2		10		20	18	$66 = 1 + 2*16 + 33$

No	NAME	2	4	17	34	#CC	CLASS EQUATION
68.2	$34 \times 2$	3		16	48	68	$68 = 1*68$
68.3	$D_{34} \times 2$	35		16	16	20	$68 = 1*2 + 2*16 + 17*2$
68.4	$Q_{68}$	1	34	16	16	20	$68 = 1*2 + 2*16 + 17*2$
68.5	$M_{17,4}^{(4)}$	17	34	16		8	$68 = 1 + 4*4 + 17*3$

No	NAME	2	5	7	10	14	35	#CC	CLASS EQUATION
70.2	$D_{10} \times 7$	5	4	6		30	24	28	$70 = 1*70$
70.3	$D_{14} \times 5$	7	4	6	28		24	25	$70 = 1*7 + 2*14 + 5*7$
70.4	$D_{70}$	35	4	6			24	19	$70 = 1 + 2*17 + 35$

No	NAME	2	3	4	6	8	9	12	18	24	36	#	CLASS EQUATION
72.02	$36 \times 2$	3	2	4	6		6	8	18		24	72	$72 = 1*72$
72.03	$18 \times 2^2$	7	2		14		6		42			72	$72 = 1*72$
72.04	$24 \times 3$	1	8	2	8	4		16		32		72	$72 = 1*72$
72.05	$12 \times 6$	3	8	4	24			32				72	$72 = 1*72$
72.06	$6^2 \times 2$	7	8		56							72	$72 = 1*72$
72.07	$D_8 \times 3^2$	5	8	2	40			16				45	$72 = 1*18 + 2*27$
72.08	$Q_8 \times 3^2$	1	8	6	8			48				45	$72 = 1*18 + 2*27$
72.09	$D_8 \times 9$	5	2	2	10		6	4	30	12		45	$72 = 1*18 + 2*27$
72.10	$Q_8 \times 9$	1	2	6	2		6	12	6	36		45	$72 = 1*18 + 2*27$
72.11	$D_6 \times 6 \times 2$	15	8		48							36	$72 = 1*12 + 2*12 + 3*12$
72.12	$D_{3,4} \times 6$	3	8	12	24			24				36	$72 = 1*12 + 2*12 + 3*12$
72.13	$D_6 \times 12$	7	8	8	20			28				36	$72 = 1*12 + 2*12 + 3*12$
72.14	$D_{3,8} \times 3$	1	8	2	8	12		16		24		36	$72 = 1*12 + 2*12 + 3*12$
72.15	$A_4 \times 6$	7	26		38							24	$72 = 1*6 + 3*6 + 4*12$
72.16	$36.08 \times 2$	7	2		14		24		24			24	$72 = 1*6 + 3*6 + 4*12$
72.17	$18.4 \times 2^2$	39	8		24							24	$72 = 1*4 + 2*16 + 9*4$
72.18	$36.10 \times 2$	3	8	36	24							24	$72 = 1*4 + 2*16 + 9*4$
72.19	$18.4 \times 4$	19	8	20	8			16				24	$72 = 1*4 + 2*16 + 9*4$
72.20		1	8	2	8	36		16				24	$72 = 1*4 + 2*16 + 9*4$
72.21	$D_{18} \times 2^2$	39	2		6		6		18			24	$72 = 1*4 + 2*16 + 9*4$
72.22	$D_{9,4} \times 2$	3	2	36	6		6		18			24	$72 = 1*4 + 2*16 + 9*4$
72.23	$D_{18} \times 4$	19	2	20	2		6	4	6		12	24	$72 = 1*4 + 2*16 + 9*4$
72.24	$D_{9,8}$	1	2	2	2	36	6	4	6		12	24	$72 = 1*4 + 2*16 + 9*4$
72.25	$24.11 \times 3$	9	8	6	36			12				27	$72 = 1*6 + 2*15 + 6*6$
72.26	$D_{24} \times 3$	13	8	2	32			16				27	$72 = 1*6 + 2*15 + 6*6$
72.27	$Q_{24} \times 3$	1	8	14	8			40				27	$72 = 1*6 + 2*15 + 6*6$
72.28	$SL_{2,3} \times 3$	1	26	6	26			12				21	$72 = 1*6 + 4*12 + 6*3$
72.29		1	26	6	26			12				21	$72 = 1*6 + 4*12 + 6*3$
72.30	$S_4 \times 3$	9	26	6	18			12				15	$72 = 1*3 + 3*3 + 6*6 + 8*3$
72.31	$D_6^2 \times 2$	31	8		32							18	$72 = 1*2 + 2*4 + 3*4 + 6*4 + 9*2$
72.32	$D_{3,4} \times D_6$	7	8	24	20			12				18	$72 = 1*2 + 2*4 + 3*4 + 6*4 + 9*2$
72.33		19	8	12	8			24				18	$72 = 1*2 + 2*4 + 3*4 + 6*4 + 9*2$
72.34	$36.14 \times 2$	19	8	36	8							12	$72 = 1*2 + 4*4 + 9*6$
72.35		1	8	18	8	36						12	$72 = 1*2 + 4*4 + 9*6$

No	NAME	2	3	4	6	8	9	12	18	24	#	CLASS EQUATION
72.36		21	8	18	24						21	$72 = 1*2 + 2*17 + 18*2$
72.37		37	8	2	8			16			21	$72 = 1*2 + 2*17 + 18*2$
72.38		1	8	38	8			16			21	$72 = 1*2 + 2*17 + 18*2$
72.39		21	2	18	6		6		18		21	$72 = 1*2 + 2*17 + 18*2$
72.40	$D_{72}$	37	2	2	2		6	4	6	12	21	$72 = 1*2 + 2*17 + 18*2$
72.41	$Q_{72}$	1	2	38	2		6	4	6	12	21	$72 = 1*2 + 2*17 + 18*2$
72.42		13	8	18	32						15	$72 = 1*2 + 2*4 + 4*2 + 6*6 + 18$
72.43		25	8	6	20			12			15	$72 = 1*2 + 2*4 + 4*2 + 6*6 + 18$
72.44		1	8	30	8			24			15	$72 = 1*2 + 2*4 + 4*2 + 6*6 + 18$
72.45		9	8	18		36					9	$72 = 1 + 8 + 9*7$
72.46	$A_4 \times D_6$	15	26		30						12	$72 = 1 + 2 + 3*2 + 6 + 8*2 + 9 + 12$
72.47		21	8	18	24						9	$72 = 1 + 4*2 + 6*2 + 9 + 12*2 + 18$
72.48		9	8	54							6	$72 = 1 + 8 + 9 + 18*3$
72.49		21	26	18	6						9	$72 = 1 + 2 + 3 + 6 + 8*3 + 18*2$
72.50		21	2	18	6		24				9	$72 = 1 + 2 + 3 + 6 + 8*3 + 18*2$

No	NAME	2	37	#CC	CLASS EQUATION
74.2	$D_{74}$	37	36	20	$74 = 1 + 2*18 + 37$

No	NAME	3	5	15	#CC	CLASS EQUATION
75.2	$15 \times 5$	8	4	32	75	$75 = 1*75$
75.3		50	24		11	$75 = 1 + 3*8 + 25*2$

No	NAME	2	4	19	38	#CC	CLASS EQUATION
76.2	$38 \times 2$	3		18	54	76	$76 = 1*76$
76.3	$D_{38} \times 2$	39		18	18	22	$76 = 1*2 + 2*18 + 19*3$
76.4	$D_{76}$	1	38	18	18	22	$76 = 1*2 + 2*18 + 19*3$

No	NAME	2	3	6	13	26	39	#CC	CLASS EQUATION
78.2	$D_6 \times 13$	3	2		12	36	24	39	$78 = 1*13 + 2*13 + 3*13$
78.3	$D_{26} \times 3$	13	2	26	12		24	24	$78 = 1*3 + 2*18 + 13*3$
78.4	$M_{13,3}^{(9)} \times 2$	1	26	26	12	12		14	$78 = 1*2 + 3*8 + 13*4$
78.5	$M_{13,6}^{(4)}$	13	26	26	12			8	$78 = 1 + 6*2 + 13*5$
78.6	$D_{78}$	39	2		12		24	21	$78 = 1 + 2*19 + 39$

No	NAME	2	4	5	8	10	16	20	40	#CC	CLASS EQUATION
80.02	$40 \times 2$	3	4	4	8	12		16	32	80	$80 = 1*80$
80.03	$20 \times 4$	3	12	4		12		48		80	$80 = 1*80$
80.04	$20 \times 2^2$	7	8	4		28		32		80	$80 = 1*80$
80.05	$10 \times 2^3$	15		4		60				80	$80 = 1*80$
80.06	$\mathbf{D}_8 \times 10$	11	4	4		44		16		50	$80 = 1*20 + 2*30$
80.07	$\mathbf{Q}_8 \times 10$	3	12	4		12		48		50	$80 = 1*20 + 2*30$
80.08	$16.08 \times 5$	7	8	4		28		32		50	$80 = 1*20 + 2*30$
80.09	$16.09 \times 5$	7	8	4		28		32		50	$80 = 1*20 + 2*30$
80.10	$\mathbf{D}_{4,4} \times 5$	3	12	4		12		48		50	$80 = 1*20 + 2*30$
80.11	$\mathbf{M}_{8,2}^{(5)} \times 5$	3	4	4	8	12		16	32	50	$80 = 1*20 + 2*30$
80.12	$\mathbf{D}_{16} \times 5$	9	2	4	4	36		8	16	35	$80 = 1*10 + 2*15 + 4*10$
80.13	$\mathbf{M}_{8,2}^{(3)} \times 5$	5	6	4	4	20		24	16	35	$80 = 1*10 + 2*15 + 4*10$
80.14	$\mathbf{Q}_{16} \times 5$	1	10	4	4	4		40	16	35	$80 = 1*10 + 2*15 + 4*10$
80.15	$\mathbf{D}_{10} \times 2^3$	47		4		28				32	$80 = 1*8 + 2*16 + 5*8$
80.16	$\mathbf{D}_{10} \times 4 \times 2$	23	24	4		12		16		32	$80 = 1*8 + 2*16 + 5*8$
80.17	$\mathbf{D}_{5,4} \times 2^2$	7	40	4		28				32	$80 = 1*8 + 2*16 + 5*8$
80.18	$\mathbf{D}_{5,4} \times 4$	3	44	4		12		16		32	$80 = 1*8 + 2*16 + 5*8$
80.19	$\mathbf{D}_{10} \times 8$	11	12	4	24	4		8	16	32	$80 = 1*8 + 2*16 + 5*8$
80.20	$\mathbf{D}_{5,8} \times 2$	3	4	4	40	12		16		32	$80 = 1*8 + 2*16 + 5*8$
80.21	$\mathbf{D}_{5,16}$	1	2	4	4	4	40	8	16	32	$80 = 1*8 + 2*16 + 5*8$
80.22	$\mathbf{M}_{5,4}^{(3)} \times 2^2$	23	40	4		12				20	$80 = 1*4 + 4*4 + 5*12$
80.23	$\mathbf{M}_{5,4}^{(3)} \times 4$	11	52	4		4		8		20	$80 = 1*4 + 4*4 + 5*12$
80.24	$\mathbf{M}_{5,8}^{(3)} \times 2$	3	20	4	40	12				20	$80 = 1*4 + 4*4 + 5*12$
80.25	$\mathbf{M}_{5,4}^{(3)} \times 4$	11	12	4	40	4		8		20	$80 = 1*4 + 4*4 + 5*12$
80.26	$\mathbf{M}_{5,16}^{(3)}$	1	2	4	20	4	40	8		20	$80 = 1*4 + 4*4 + 5*12$
80.27	$40.12 \times 2$	27	20	4		28				26	$80 = 1*4 + 2*18 + 10*4$
80.28	$\mathbf{D}_{40} \times 2$	43	4	4		12		16		26	$80 = 1*4 + 2*18 + 10*4$
80.29	$\mathbf{Q}_{40} \times 2$	3	44	4		12		16		26	$80 = 1*4 + 2*18 + 10*4$
80.30		7	40	4		28				26	$80 = 1*4 + 2*18 + 10*4$
80.31		23	24	4		12		16		26	$80 = 1*4 + 2*18 + 10*4$
80.32		3	44	4		12		16		26	$80 = 1*4 + 2*18 + 10*4$
80.33	$\mathbf{D}_{20,4}$	3	44	4		12	16			26	$80 = 1*4 + 2*18 + 10*4$
80.34		23	24	4		12	16			26	$80 = 1*4 + 2*18 + 10*4$
80.35		3	4	4	40	12	16			26	$80 = 1*4 + 2*18 + 10*4$

No	NAME	2	4	5	8	10	16	20	#CC	CLASS EQUATION
80.36		11	12	4	24	4	8	16	26	$80 = 1*4 + 2*18 + 10*4$
80.37	$D_{10} \times D_8$	35	12	4		20	8		20	$80 = 1*2+2*7+4*6+5*2+10*3$
80.38	$D_{10} \times Q_8$	11	36	4		4	24		20	$80 = 1*2+2*7+4*6+5*2+10*3$
80.39		15	32	4		20	8		20	$80 = 1*2+2*7+4*6+5*2+10*3$
80.40		31	16	4		4	24		20	$80 = 1*2+2*7+4*6+5*2+10*3$
80.41		23	40	4		12			14	$80 = 1*2 + 2 + 4*4 + 5*2 + 10*5$
80.42		11	52	4		4	8		14	$80 = 1*2 + 2 + 4*4 + 5*2 + 10*5$
80.43		3	20	4	40	12			14	$80 = 1*2 + 2 + 4*4 + 5*2 + 10*5$
80.44		11	12	4	40	4	8		14	$80 = 1*2 + 2 + 4*4 + 5*2 + 10*5$
80.45		25	2	4	20	20	8		17	$80 = 1*2 + 2*5 + 4*7 + 10*2 + 20$
80.46		5	22	4	20	20	8		17	$80 = 1*2 + 2*5 + 4*7 + 10*2 + 20$
80.47		21	6	4	20	4	24		17	$80 = 1*2 + 2*5 + 4*7 + 10*2 + 20$
80.48		1	26	4	20	4	24		17	$80 = 1*2 + 2*5 + 4*7 + 10*2 + 20$
80.49		41	2	4	4	4	8	16	23	$80 = 1*2 + 2*19 + 20*2$
80.50	$M_{40,2}^{(19)}$	21	22	4	4	4	8	16	23	$80 = 1*2 + 2*19 + 20*2$
80.51		1	42	4	4	4	8	16	23	$80 = 1*2 + 2*19 + 20*2$
80.52		15		64					8	$80 = 1 + 5*3 + 16*4$

No	NAME	3	9	27	#CC	CLASS EQUATION
81.02	$27 \times 3$	8	18	54	81	$81 = 1*81$
81.03	$9^2$	8	72		81	$81 = 1*81$
81.04	$9 \times 3^2$	25	54		81	$81 = 1*81$
81.05	$3^4$	80			81	$81 = 1*81$
81.06	$27.4 \times 3$	80			33	$81 = 1*9 + 3*24$
81.07	$M_{9,3}^{(4)} \times 3$	26	54		33	$81 = 1*9 + 3*24$
81.08		26	54		33	$81 = 1*9 + 3*24$
81.09	$M_{9,9}^{(7)}$	8	72		33	$81 = 1*9 + 3*24$
81.10		26	54		33	$81 = 1*9 + 3*24$
81.11	$M_{27,3}^{(3)}$	8	18	54	33	$81 = 1*9 + 3*24$
81.12		44	36		17	$81 = 1*3 + 3*8 + 9*6$
81.13		62	18		17	$81 = 1*3 + 3*8 + 9*6$
81.14		26	54		17	$81 = 1*3 + 3*8 + 9*6$
81.15		8	72		17	$81 = 1*3 + 3*8 + 9*6$

No	NAME	2	41	#CC	CLASS EQUATION
82.2	$D_{82}$	41	40	22	$82 = 1 + 2*20 + 41$

No	NAME	2	3	4	6	7	12	14	21	28	42	#CC	CLASS EQUATION
84.02	$42 \times 2$	3	2		6	6		18	12		36	84	$84 = 1*84$
84.03	$D_6 \times 14$	7	2		2	6		42	12		12	42	$84 = 1*14+2*14+3*14$
84.04	$D_{3,4} \times 7$	1	2	6	2	6		6	12	36	12	42	$84 = 1*14+2*14+3*14$
84.05	$A_4 \times 7$	3	8			6		18	40			28	$84 = 1*7 + 3*7 + 4*14$
84.06	$D_{14} \times 6$	15	2		30	6		6	12		12	30	$84 = 1**6 + 2*18 + 7*6$
84.07	$D_{7,4} \times 3$	1	2	14	2	6	28	6	12		12	30	$84 = 1*6 + 2**18 + 7*6$
84.08	$M_{7,3}^{(4)} \times 2^2$	3	14		42	6		18				20	$84 = 1*4 + 3*8 + 7*8$
84.09	$M_{7,3}^{(4)} \times 4$	1	14	2	14	6	28	6		12		20	$84 = 1*4 + 3*8 + 7*8$
84.10	$M_{7,6}^{(5)} \times 2$	15	14		42	6		6				14	$84 = 1*2 + 6*2 + 7*10$
84.11	$M_{7,12}^{(3)}$	1	14	14	14	6	28	6				14	$84 = 1*2 + 6*2 + 7*10$
84.12	$D_{42} \times 2$	43	2		2	6		6	12		12	24	$84 = 1*2+3*20+21*2$
84.13	$D_{21,4}$	1	2	42	2	6		6	12		12	24	$84 = 1*2+3*20+21*2$
84.14	$D_{14} \times D_6$	31	2		14	6		18	12			15	$84 = 1+2*4+3+4*3+6*3+7$
84.15		3	56			6		18				12	$84 = 1 + 3*9 + 28*2$

No	NAME	2	43	#CC	CLASS EQUATION
86.2	$D_{86}$	43	42	23	$86 = 1 + 2*21 + 43$

No	NAME	2	4	8	11	22	44	#CC	CLASS EQUATION
88.02	$44 \times 2$	3	4		10	30	40	88	$88 = 1*88$
88.03	$22 \times 2^2$	7			10	70		88	$88 = 1*88$
88.04	$D_8 \times 11$	5	2		10	50	20	55	$88 = 1*22 + 2*23$
88.05	$Q_8 \times 11$	1	6		10	10	60	55	$88 = 1*22 + 2*23$
88.06	$D_{22} \times 2^2$	47			10	30		28	$88 = 1*4 + 2*20 + 11*4$
88.07	$D_{22} \times 4$	23	24		10	10	20	28	$88 = 1*4 + 2*20 + 11*4$
88.08	$D_{11,4} \times 2$	3	44		10	30		28	$88 = 1*4 + 2*20 + 11*4$
88.09	$D_{11,8}$	1	2	44	10	10	20	28	$88 = 1*4 + 2*20 + 11*4$
88.10		1	25	22		30		25	$88 = 1*2 + 2*21 + 22*2$
88.11	$D_{88}$	45	2		10	10	20	25	$88 = 1*2 + 2*21 + 22*2$
88.12		1	46		10	10	20	25	$88 = 1*2 + 2**21 + 22*2$

No	NAME	2	3	5	6	9	10	15	18	30	45	#	CLASS EQUATION
90.02	$30 \times 3$	1	8	4		8	4		32	32		90	$90 = 1*90$
90.03	$D_6 \times 15$	3	8	4	6		12	32		24		45	$90 = 1*15 + 2*15 + 3*15$
90.04	$18.4 \times 5$	9	8	4			36	32				30	$90 = 1*5 + 2*20 + 9*5$
90.05	$D_{18} \times 5$	9	2	4		6	36	8			24	30	$90 = 1*5 + 2*20 + 9*5$
90.06	$D_{10} \times 3^2$	5	8	4	40			32				36	$90 = 1*9 + 2*18 + 5*9$
90.07	$D_{10} \times 9$	5	2	4	10	5		8	30		24	36	$90 = 1*9 + 2*18 + 5*9$
90.08	$D_{30} \times 3$	15	8	4	30			32				27	$90 = 1*3 + 2*21 + 15*3$
90.09		45	8	4				32				24	$90 = 1 + 2*22 + 45$
90.10	$D_{90}$	45	2	4		6		8			24	24	$90 = 1 + 2*22 + 45$

No	NAME	2	4	23	46	#CC	CLASS EQUATION
92.2	$46 \times 2$	3		22	66	92	$92 = 1*92$
92.3	$D_{46} \times 2$	47		22	22	26	$92 = 1*2 + 2*22 + 23*2$
92.4	$Q_{92}$	1	46	22	22	26	$92 = 1*2 + 2*22 + 23*2$

No	NAME	2	47	#CC	CLASS EQUATION
94.2	$D_{94}$	47	46	25	$94 = 1 + 2*23 + 47$

There are 231 groups of order 96, of which 7 are abelian.

No	NAME	2	7	14	49	#CC	CLASS EQUATION
98.2	$14 \times 7$	1	48	48		98	$98 = 1*98$
98.3	$D_{14} \times 7$	7	48	42		35	$98 = 1*7 + 2*21 + 7*7$
98.4		49	48			26	$98 = 1 + 2*24 + 49$
98.5	$D_{98}$	49	6		42	26	$98 = 1 + 2*24 + 49$

No	NAME	3	8	11	33	#CC	CLASS EQUATION
99.2	$33 \times 3$	8		10	80	99	$99 = 1*99$

No	NAME	2	4	5	10	20	25	50	#CC	CLASS EQUATION
100.02	$50 \times 2$	3		4	12		20	60	100	$100 = 1*100$
100.03	$20 \times 5$	1	2	24	24	48			100	$100 = 1*100$
100.04	$10^2$	3		24	72				100	$100 = 1*100$
100.05	$D_{10} \times 10$	11		24	64				40	$100 = 1*10 + 2*20 + 5*10$
100.06	$D_{5,4} \times 5$	1	10	24	40				40	$100 = 1*10 + 2*20 + 5*10$
100.07	$M_{5,4}^{(2)} \times 5$	5	10	24	20	40			25	$100 = 1*5 + 4*5 + 5*15$
100.08	$50.4 \times 2$	51		24	24				28	$100 = 1*2 + 2*24 + 25*2$
100.09		1	50	24	24				28	$100 = 1*2 + 2*24 + 25*2$
100.10	$D_{50} \times 2$	51		4	4		20	20	28	$100 = 1*2 + 2*24 + 25*2$

No	NAME	2	4	5	10	20	25	50	#CC	CLASS EQUATION
100.11	$M_{25,4}^{(7)}$	1	50	4	4		20	20	28	$100 = 1*2 + 2*24 + 25*2$
100.12	$D_{10}^2$	35		24	40				16	$100 = 1+2*4+4*4+5*2+10*4+25$
100.13		5	10	24	20	40			10	$100 = 1 + 2*4 + 4 + 12 + 25*3$
100.14		25	50	24					10	$100 = 1 + 4*6 + 25*3$
100.15		5	50	24	20				13	$100 = 1+2*2+4*5+5+10*2+25*2$
100.16	$M_{25,4}^{(7)}$	25	50	4		20			10	$100 = 1 + 4*6 + 25*3$

