

THE SUBGROUP LATTICE OF A_6

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Nr.	Structure	Order	Length	Maximal Subgroups	Minimal Overgroups
1	A_6	360	1	2 (6), 3 (6), 4 (10), 5 (15), 6 (15)	
2	A_5	60	6	8 (5), 10 (6), 13 (10)	1
3	A_5	60	6	9 (5), 10 (6), 14 (10)	1
4	$3 : S_3 \cdot 2$	36	10	7, 16 (9)	1
5	$2^2 : S_3$	24	15	9, 12 (3), 14 (4)	1
6	$2^2 : S_3$	24	15	8, 12 (3), 13 (4)	1
7	$3 : S_3$	18	10	11, 14 (6), 13 (6)	4
8	A_4	12	15	17, 19 (4)	2 (2), 6
9	A_4	12	15	18, 20 (4)	3 (2), 5
10	D_{10}	10	36	15, 21 (5)	2, 3
11	3^2	9	10	20 (2), 19 (2)	7
12	D_8	8	45	18, 16, 17	5, 6
13	S_3	6	60	19, 21 (3)	2, 6, 7
14	S_3	6	60	20, 21 (3)	3, 5, 7
15	5	5	36	22	10
16	4	4	45	21	4 (2), 12
17	2^2	4	15	21 (3)	8, 12 (3)
18	2^2	4	15	21 (3)	9, 12 (3)
19	3	3	20	22	8 (3), 11, 13 (3)
20	3	3	20	22	9 (3), 11, 14 (3)
21	2	2	45	22	10 (4), 13 (4), 14 (4), 16, 17, 18
22	1	1	1		15 (36), 19 (20), 20 (20), 21 (45)

TABLE 1. Subgroup lattice of A_6

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