

Table 1: Census of planar discrete group actions of genus  $g = 4$

Ref	Signature	SMG id	Structure	#epi	#strong	#equiv
O4.4	$(0; \{2^1 0\})$	$\langle 2, 1 \rangle$	$\mathbb{Z}_2$	1	1	1
O4.7	$(0; \{3^6\})$	$\langle 3, 1 \rangle$	$\mathbb{Z}_3$	22	11	2
O4.10	$(0; \{2^7\})$	$\langle 4, 2 \rangle$	$\mathbb{Z}_2 \times \mathbb{Z}_2$	546	91	2
O4.11	$(0; \{2^4, 4^2\})$	$\langle 4, 1 \rangle$	$\mathbb{Z}_4$	2	1	1
O4.12	$(0; \{2, 4^4\})$	$\langle 4, 1 \rangle$	$\mathbb{Z}_4$	8	4	1
O4.13	$(0; \{5, 5, 5, 5\})$	$\langle 5, 1 \rangle$	$\mathbb{Z}_5$	52	13	3
O4.16	$(0; \{2^6\})$	$\langle 6, 1 \rangle$	$\text{Sym}(3)$	240	40	1
O4.17	$(0; \{2^2, 3^3\})$	$\langle 6, 1 \rangle$	$\text{Sym}(3)$	24	4	1
O4.18	$(0; \{2^2, 3^3\})$	$\langle 6, 2 \rangle$	$\mathbb{Z}_6$	2	1	1
O4.19	$(0; \{2^3, 3, 6\})$	$\langle 6, 2 \rangle$	$\mathbb{Z}_6$	2	1	1
O4.20	$(0; \{3, 3, 6, 6\})$	$\langle 6, 2 \rangle$	$\mathbb{Z}_6$	6	3	2
O4.21	$(0; \{2, 6, 6, 6\})$	$\langle 6, 2 \rangle$	$\mathbb{Z}_6$	2	1	1
O4.22	$(0; \{2^4, 4\})$	$\langle 8, 3 \rangle$	$D_8$	176	22	2
O4.23	$(0; \{2, 4, 4, 4\})$	$\langle 8, 4 \rangle$	$Q_8$	24	1	1
O4.24	$(0; \{2, 2, 8, 8\})$	$\langle 8, 1 \rangle$	$\mathbb{Z}_8$	4	1	1
O4.25	$(0; \{3, 3, 3, 3\})$	$\langle 9, 2 \rangle$	$\mathbb{Z}_3 \times \mathbb{Z}_3$	432	9	2
O4.26	$(0; \{9, 9, 9\})$	$\langle 9, 1 \rangle$	$\mathbb{Z}_9$	18	3	1
O4.27	$(0; \{2, 2, 5, 5\})$	$\langle 10, 1 \rangle$	$D_{10}$	80	4	2
O4.28	$(0; \{2, 2, 5, 5\})$	$\langle 10, 2 \rangle$	$\mathbb{Z}_{10}$	4	1	1
O4.29	$(0; \{5, 10, 10\})$	$\langle 10, 2 \rangle$	$\mathbb{Z}_{10}$	12	3	2
O4.31	$(0; \{2^5\})$	$\langle 12, 4 \rangle$	$D_{12}$	960	80	1
O4.32	$(0; \{2, 3, 3, 3\})$	$\langle 12, 3 \rangle$	$\text{Alt}(4)$	96	4	1
O4.33	$(0; \{2, 2, 3, 6\})$	$\langle 12, 4 \rangle$	$D_{12}$	24	2	1
O4.34	$(0; \{2, 2, 3, 6\})$	$\langle 12, 5 \rangle$	$\mathbb{Z}_6 \times \mathbb{Z}_2$	12	1	1
O4.35	$(0; \{6, 6, 6\})$	$\langle 12, 5 \rangle$	$\mathbb{Z}_6 \times \mathbb{Z}_2$	12	1	1
O4.36	$(0; \{4, 6, 12\})$	$\langle 12, 2 \rangle$	$\mathbb{Z}_{12}$	4	1	1
O4.37	$(0; \{3, 12, 12\})$	$\langle 12, 2 \rangle$	$\mathbb{Z}_{12}$	4	1	1
O4.38	$(0; \{3, 5, 15\})$	$\langle 15, 1 \rangle$	$\mathbb{Z}_{15}$	8	1	1
O4.39	$(0; \{2, 2, 2, 8\})$	$\langle 16, 7 \rangle$	$D_{16}$	96	3	1
O4.40	$(0; \{4, 4, 8\})$	$\langle 16, 9 \rangle$	$Q_{16}$	32	1	1
O4.41	$(0; \{2, 16, 16\})$	$\langle 16, 1 \rangle$	$\mathbb{Z}_{16}$	8	1	1
O4.42	$(0; \{2, 2, 3, 3\})$	$\langle 18, 3 \rangle$	$\mathbb{Z}_3 \times \text{Sym}(3)$	48	4	2
O4.43	$(0; \{2, 2, 3, 3\})$	$\langle 18, 4 \rangle$	$(\mathbb{Z}_3 \times \mathbb{Z}_3) : \mathbb{Z}_2$	432	1	1
O4.44	$(0; \{3, 6, 6\})$	$\langle 18, 3 \rangle$	$\mathbb{Z}_3 \times \text{Sym}(3)$	24	2	2
O4.45	$(0; \{3, 6, 6\})$	$\langle 18, 5 \rangle$	$\mathbb{Z}_6 \times \mathbb{Z}_3$	48	1	1
O4.46	$(0; \{2, 9, 18\})$	$\langle 18, 2 \rangle$	$\mathbb{Z}_{18}$	6	1	1
O4.47	$(0; \{2, 2, 2, 5\})$	$\langle 20, 4 \rangle$	$D_{20}$	120	3	1
O4.48	$(0; \{4, 4, 5\})$	$\langle 20, 1 \rangle$	$\mathbb{Z}_5 : \mathbb{Z}_4$	40	1	1
O4.49	$(0; \{4, 4, 5\})$	$\langle 20, 3 \rangle$	$\mathbb{Z}_5 : \mathbb{Z}_4$	40	2	1
O4.50	$(0; \{2, 10, 10\})$	$\langle 20, 5 \rangle$	$\mathbb{Z}_{10} \times \mathbb{Z}_2$	24	1	1
O4.51	$(0; \{2, 2, 2, 4\})$	$\langle 24, 12 \rangle$	$\text{Sym}(4)$	96	4	1

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Ref	Signature	SMG id	Structure	#epi	#strong	#equiv
O4.52	$(0; \{3, 4, 6\})$	$\langle 24, 3 \rangle$	$SL(2, 3)$	24	1	1
O4.53	$(0; \{2, 6, 12\})$	$\langle 24, 10 \rangle$	$\mathbb{Z}_3 \times D_8$	16	1	1
O4.54	$(0; \{2, 4, 16\})$	$\langle 32, 19 \rangle$	$QD32$	64	1	1
O4.55	$(0; \{2, 2, 2, 3\})$	$\langle 36, 10 \rangle$	$Sym(3) \times Sym(3)$	216	3	1
O4.56	$(0; \{3, 4, 4\})$	$\langle 36, 9 \rangle$	$(\mathbb{Z}_3 \times \mathbb{Z}_3) : \mathbb{Z}_4$	144	1	1
O4.57	$(0; \{3, 3, 6\})$	$\langle 36, 11 \rangle$	$\mathbb{Z}_3 \times Alt(4)$	144	1	1
O4.58	$(0; \{2, 6, 6\})$	$\langle 36, 10 \rangle$	$Sym(3) \times Sym(3)$	72	1	1
O4.59	$(0; \{2, 6, 6\})$	$\langle 36, 12 \rangle$	$\mathbb{Z}_6 \times Sym(3)$	48	2	1
O4.60	$(0; \{2, 4, 10\})$	$\langle 40, 8 \rangle$	$(\mathbb{Z}_{10} \times \mathbb{Z}_2) : \mathbb{Z}_2$	80	1	1
O4.61	$(0; \{2, 5, 5\})$	$\langle 60, 5 \rangle$	$Alt(5)$	120	1	1
O4.62	$(0; \{2, 4, 6\})$	$\langle 72, 40 \rangle$	$(Sym(3) \times Sym(3)) : \mathbb{Z}_2$	144	1	1
O4.63	$(0; \{2, 3, 12\})$	$\langle 72, 42 \rangle$	$\mathbb{Z}_3 \times Sym(4)$	48	1	1
O4.64	$(0; \{2, 4, 5\})$	$\langle 120, 34 \rangle$	$Sym(5)$	120	1	1