

$$d = 8$$

$$\Phi_{\mathbb{Q}}(8) \supseteq \left\{ \begin{array}{l} (3), (4), (5), (6), (7), (8), (9), (10), (12), (13), (15), (16), (17), (20), (21), (24), (30), (32), \\ (2, 2), (2, 4), (2, 6), (2, 8), (2, 10), (2, 12), (2, 16), (2, 20), (2, 24), (3, 3), (3, 6), (3, 12), (4, 4), (4, 8), (4, 12), (5, 5), (6, 6) \end{array} \right\}$$

G	$\Phi_{\mathbb{Q}}(8, G) \setminus \{G\} \supseteq$
()	{(3), (5), (7), (9), (13), (15), (17), (3, 3), (5, 5)}
(2)	{(4), (6), (8), (10), (12), (16), (20), (24), (32), (2, 2), (2, 4), (2, 6), (2, 8), (2, 10), (2, 12), (2, 16), (2, 20), (2, 24), (3, 6), (3, 12), (4, 4), (4, 8), (4, 12), (6, 6)}
(3)	{(15), (3, 3)}
(4)	{(8), (12), (16), (20), (24), (32), (2, 4), (2, 8), (2, 12), (2, 16), (2, 20), (2, 24), (4, 4), (4, 8), (4, 12)}
(5)	{(15), (5, 5)}
(6)	{(12), (24), (2, 6), (2, 12), (2, 24), (3, 6), (3, 12), (4, 12), (6, 6)}
(7)	{(21)}
(8)	{(16), (24), (32), (2, 8), (2, 16), (4, 8)}
(9)	{}
(10)	{(20), (30), (2, 10), (2, 20)}
(12)	{(24), (2, 12), (2, 24), (4, 12)}
(2, 2)	{(2, 4), (2, 6), (2, 8), (2, 10), (2, 12), (2, 16), (2, 20), (2, 24), (4, 4), (4, 8), (4, 12)}
(2, 4)	{(2, 8), (2, 12), (2, 16), (4, 4), (4, 8)}
(2, 6)	{(2, 12), (2, 24), (4, 12)}
(2, 8)	{(2, 16), (2, 24), (4, 8)}

$$h_{\mathbb{Q}}(8) \geq 17 \quad \#\mathcal{H}_{\mathbb{Q}}(8) \geq 275 \quad N_{\mathbb{Q}}(8) \geq 277440$$

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
()	(3)	19a2
()	(9)	54a2
()	(3), (5)	11a2
()	(3), (7)	208d1
()	(3), (13)	2890d1
()	(3), (15)	50b3
()	(3), (17)	14450n1
()	$(3)^2, (3, 3)$	175b2
()	$(3), (5)^2$	18176b2
()	(3), (5), (5, 5)	275b2
()	(3), (5), (15)	50a2
()	$(3)^2, (5), (3, 3)$	121b1
()	$(3), (5)^2, (5, 5)$	99d2
()	$(3)^2, (5), (15), (3, 3)$	338d1
(2)	(4), (2, 6), (4, 12)	36a3
(2)	(2, 2), $(2, 4)^2, (2, 6)$	223494n1
(2)	(4), (2, 6), $(2, 12)^2$	80b1
(2)	(4), (2, 6), (2, 12), (4, 12)	1040g2
(2)	(4), (6), (2, 2), (4, 4)	128b1
(2)	(6), (2, 2), $(2, 4)^2$	200b2
(2)	(4), (2, 2), $(2, 4)^2, (2, 6)$	2205a2
(2)	(4), (6), (2, 2), $(2, 4)^2$	46a1
(2)	(4), (6), (2, 2), (2, 4), (4, 4)	128a1
(2)	(4), (6), (2, 2), (2, 6), (4, 12)	144a1
(2)	(4), (6), (2, 10), $(2, 20)^2$	450a3
(2)	(6), (2, 2), $(2, 4)^2, (2, 8)$	200b1
(2)	(6), (8), (2, 2), (2, 4), (4, 8)	294f1
(2)	(6), (12), (2, 2), (2, 6), (4, 12)	144a3
(2)	(4), (6), (2, 2), $(2, 4)^2, (2, 10)$	1014c2
(2)	(4), (6), (2, 2), (2, 4), (2, 6), (2, 12)	144a2
(2)	(4), (6), (2, 2), (2, 4), (2, 8), (4, 4)	49a1
(2)	(4), (6), (8), (2, 2), $(2, 4)^2$	128a2
(2)	(4), (6), $(8)^2, (2, 2), (4, 4)$	16810b2
(2)	(4), (6), (10), (2, 2), $(2, 4)^2$	576f2
(2)	(4), (6), (10), (2, 2), (2, 4), (4, 4)	2304h1
(2)	(4), (6), (12), (2, 2), (2, 6), (4, 4)	576a1
(2)	(4), (10), (2, 2), $(2, 4)^2, (2, 6)$	288a2

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(2)	$(4), (10), (12), (2, 2), (2, 4)^2$	288a1
(2)	$(6), (12), (2, 2), (2, 4), (2, 6), (2, 12)$	36a4
(2)	$(4)^2, (6), (8), (2, 2), (4, 4), (4, 8)$	200c4
(2)	$(4)^2, (6), (8)^2, (2, 2), (4, 4)$	320a4
(2)	$(4)^2, (8), (2, 6), (2, 12)^2, (2, 24)$	14400bo8
(2)	$(4)^2, (8)^2, (2, 6), (2, 12)^2$	450g1
(2)	$(4), (6), (2, 2), (2, 4)^2, (2, 6), (6, 6)$	726a1
(2)	$(4), (6), (2, 2), (2, 4), (2, 8)^2, (4, 4)$	768c2
(2)	$(4), (6), (8)^2, (2, 2), (2, 4)^2$	49a2
(2)	$(4), (6), (8)^2, (10), (2, 2), (4, 4)$	256b2
(2)	$(4), (6), (10), (2, 2), (2, 4)^2, (2, 10)$	66c3
(2)	$(4), (6), (10), (2, 2), (2, 4), (2, 8), (4, 4)$	256b1
(2)	$(4), (6), (10), (2, 2), (2, 4), (2, 10), (2, 20)$	14400cg3
(2)	$(4), (6), (12), (2, 2), (2, 4)^2, (2, 6)$	14a3
(2)	$(4), (6), (12), (2, 2), (2, 4), (2, 6), (2, 12)$	576a2
(2)	$(4), (6), (12), (2, 6), (2, 12)^2, (6, 6)$	98a3
(2)	$(4), (8), (12), (2, 2), (2, 4), (2, 12), (2, 24)$	14400ef3
(2)	$(4), (8), (12), (24), (2, 2), (2, 4), (2, 12)$	30a3
(2)	$(4), (12), (24), (2, 2), (2, 4), (2, 12), (2, 24)$	14400bo3
(2)	$(6), (8)^2, (16)^2, (2, 2), (4, 8)$	2880r6
(2)	$(6), (10), (20), (2, 2), (2, 4), (2, 10), (2, 20)$	450a4
(2)	$(6), (12), (24), (2, 2), (2, 4), (2, 6), (2, 12)$	1040g1
(2)	$(4)^2, (6), (8), (2, 2), (2, 4)^2, (2, 8)$	153c1
(2)	$(4)^2, (6), (8), (2, 2), (2, 10), (4, 4), (4, 8)$	64a4
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4)^2$	120b1
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4), (4, 4)$	153c4
(2)	$(4)^2, (8)^2, (2, 6), (2, 12)^2, (4, 12)$	960o7
(2)	$(4), (6), (8)^2, (2, 2), (2, 4), (2, 8), (2, 16)$	576i4
(2)	$(4), (6), (8)^2, (2, 2), (2, 4), (2, 8), (4, 4)$	294f2
(2)	$(4), (6), (8)^2, (16), (2, 2), (2, 4), (2, 8)$	126b1
(2)	$(4), (6), (8), (12), (2, 2), (2, 4)^2, (2, 6)$	130a3
(2)	$(4), (6), (8), (16), (2, 2), (2, 4), (2, 8), (4, 8)$	144b1
(2)	$(4), (6), (8), (16), (32), (2, 2), (2, 4), (2, 16)$	3150bk1
(2)	$(4), (6), (10), (20), (2, 2), (2, 4)^2, (2, 10)$	150b3
(2)	$(4), (6), (12), (2, 2), (2, 4), (2, 6), (2, 12), (4, 4)$	130a4
(2)	$(4), (8), (12), (24), (2, 2), (2, 4), (2, 12), (2, 24)$	960e3
(2)	$(4), (8), (12), (24), (2, 2), (2, 4), (2, 12), (4, 12)$	720j3

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(2)	$(6)^2, (2, 2), (2, 4)^2, (2, 6)^2, (3, 6)$	256a2
(2)	$(4)^2, (6), (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	200c3
(2)	$(4)^2, (6), (8), (2, 2), (2, 4), (2, 8)^2, (4, 4)$	289a4
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4)^2, (2, 8)$	33a2
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4)^2, (4, 4)$	33a4
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4), (2, 10), (4, 4)$	576h1
(2)	$(4)^2, (6), (8), (10), (2, 2), (2, 4)^2, (2, 8)$	288d2
(2)	$(4)^2, (8)^2, (12), (2, 2), (2, 4), (2, 10), (4, 4)$	288d4
(2)	$(4)^2, (8), (10), (12), (2, 2), (2, 4)^2, (2, 8)$	288d3
(2)	$(4), (6)^2, (2, 2), (2, 4)^2, (2, 6)^2, (3, 6)$	1210a1
(2)	$(4), (6), (8), (2, 2), (2, 4), (2, 8), (2, 16)^2, (4, 8)$	277440dv8
(2)	$(4), (6), (8)^3, (16), (2, 2), (2, 8), (4, 8)$	45a6
(2)	$(4), (6), (8)^2, (16), (2, 2), (2, 4), (2, 8), (2, 16)$	45a1
(2)	$(4), (6), (8)^2, (16), (2, 2), (2, 4), (2, 8), (4, 8)$	24a6
(2)	$(4), (6), (8), (16), (2, 2), (2, 4), (2, 8)^2, (4, 8)$	1344g5
(2)	$(6)^2, (2, 2), (2, 4)^2, (2, 6)^2, (2, 8), (3, 6)$	256a1
(2)	$(4)^2, (6), (8), (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	17a3
(2)	$(4)^2, (6), (8)^3, (2, 2), (2, 4)^2, (2, 8)$	306c5
(2)	$(4)^2, (6), (8)^4, (2, 2), (4, 4), (4, 8)$	187200eh5
(2)	$(4)^2, (6), (20), (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	64a2
(2)	$(4), (6)^2, (12), (2, 2), (2, 4)^2, (2, 6)^2, (3, 6)$	726a2
(2)	$(4), (6), (8)^3, (2, 2), (2, 8), (2, 16)^2, (4, 8)$	1200j6
(2)	$(4), (6), (8)^3, (16)^2, (2, 2), (2, 8), (4, 8)$	225c6
(2)	$(4), (6), (8)^2, (16), (2, 2), (2, 4), (2, 8)^2, (4, 8)$	42a5
(2)	$(4), (6), (8)^2, (16)^2, (2, 2), (2, 4), (2, 8), (2, 16)$	630c1
(2)	$(4), (6), (8)^2, (16)^2, (2, 2), (2, 4), (2, 8), (4, 8)$	48a4
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	600a4
(2)	$(4)^2, (6), (8)^4, (2, 2), (4, 4), (4, 8)^2$	6150n6
(2)	$(4)^2, (6), (8)^3, (16), (2, 2), (2, 4)^2, (2, 8)$	126b3
(2)	$(4)^2, (6), (8), (20), (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	32a3
(2)	$(4), (6)^2, (12), (2, 2), (2, 4), (2, 6)^2, (2, 12), (3, 6), (6, 6)$	3136k3
(2)	$(4), (6), (8)^3, (16), (2, 2), (2, 8), (2, 16)^2, (4, 8)$	75b6
(2)	$(4), (6), (8)^3, (16)^3, (2, 2), (2, 8), (4, 8)$	4800cd6
(2)	$(4), (6), (8)^2, (16), (2, 2), (2, 4), (2, 8), (2, 16)^2, (4, 8)$	510e7
(2)	$(4), (6), (8)^2, (16)^2, (32), (2, 2), (2, 4), (2, 8), (2, 16)$	75b1
(2)	$(4), (6), (8), (16)^2, (2, 2), (2, 4), (2, 8), (2, 16)^2, (4, 8)$	1470k3
(2)	$(6)^2, (12), (2, 2), (2, 4), (2, 6)^2, (2, 12), (3, 6), (3, 12), (6, 6)$	98a4

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(2)	$(4)^2, (6), (8)^2, (2, 2), (2, 4)^2, (2, 8)^3, (4, 4)$	63a6
(2)	$(4)^2, (6), (8)^3, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	231a5
(2)	$(4)^2, (6), (8)^4, (2, 2), (2, 4), (2, 8)^2, (4, 4)$	975a6
(2)	$(4)^2, (6), (8)^4, (16)^2, (2, 2), (4, 4), (4, 8)$	4410r6
(2)	$(4)^2, (6), (8)^3, (16)^2, (2, 2), (2, 4)^2, (2, 8)$	45a7
(2)	$(4)^2, (6), (8)^2, (12)^2, (2, 2), (2, 4)^2, (2, 6), (2, 12)$	210a3
(2)	$(4)^2, (6), (8)^2, (12)^2, (2, 2), (2, 4), (2, 6), (2, 12)^2$	30a8
(2)	$(4)^2, (6), (8), (12)^2, (2, 2), (2, 4)^2, (2, 6), (2, 8), (2, 12)$	14400bo1
(2)	$(4)^2, (6), (8), (12)^2, (2, 2), (2, 4), (2, 6), (2, 8), (2, 12)^2$	14400ef8
(2)	$(4)^2, (6), (8), (12)^2, (24), (2, 2), (2, 4)^2, (2, 6), (2, 12)$	30a7
(2)	$(4)^2, (6), (8), (16)^2, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	40a2
(2)	$(4)^2, (6), (12)^2, (24), (2, 2), (2, 4)^2, (2, 6), (2, 8), (2, 12)$	14400ef7
(2)	$(4)^2, (6), (12)^2, (24), (2, 2), (2, 4), (2, 6), (2, 8), (2, 12)^2$	14400bo7
(2)	$(4), (6)^2, (12)^2, (2, 2), (2, 4)^2, (2, 6)^2, (3, 6), (6, 6)$	112c3
(2)	$(4), (6), (8)^2, (16)^2, (2, 2), (2, 4), (2, 8), (2, 16)^2, (4, 8)$	1680p1
(2)	$(4)^2, (6), (8)^3, (2, 2), (2, 4)^2, (2, 8)^3, (4, 4)$	21a6
(2)	$(4)^2, (6), (8)^4, (16), (2, 2), (2, 4), (2, 8)^2, (4, 4)$	7605p6
(2)	$(4)^2, (6), (8)^3, (16), (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	21a5
(2)	$(4)^2, (6), (8)^3, (16)^3, (2, 2), (2, 4)^2, (2, 8)$	45a3
(2)	$(4)^2, (6), (8)^2, (16)^2, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	192c5
(2)	$(4)^2, (6), (8)^4, (16)^2, (2, 2), (2, 4), (2, 8)^2, (4, 4)$	630c6
(2)	$(4)^2, (6), (8)^3, (16), (2, 2), (2, 4)^2, (2, 8)^3, (4, 4)$	48a2
(2)	$(4)^2, (6), (8)^3, (16)^2, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	42a6
(2)	$(4)^2, (6), (8)^2, (12)^2, (2, 2), (2, 4)^2, (2, 6), (2, 12)^2, (4, 4)$	90c4
(2)	$(4)^2, (6), (8)^2, (12)^2, (24), (2, 2), (2, 4)^2, (2, 6), (2, 8), (2, 12)$	90c5
(2)	$(4)^2, (6), (8)^2, (12)^2, (24), (2, 2), (2, 4), (2, 6), (2, 8), (2, 12)^2$	1050k4
(2)	$(4)^2, (6), (8)^2, (16)^2, (2, 2), (2, 4)^2, (2, 8)^3, (4, 4)$	75b7
(2)	$(4)^2, (6), (8), (12)^2, (24), (2, 2), (2, 4)^2, (2, 6), (2, 12)^2, (4, 4)$	960e7
(2)	$(4)^2, (6), (8), (12)^2, (24)^2, (2, 2), (2, 4)^2, (2, 6), (2, 8), (2, 12)$	720j7
(2)	$(4)^2, (6), (8), (12)^2, (24)^2, (2, 2), (2, 4), (2, 6), (2, 8), (2, 12)^2$	150c8
(2)	$(4)^2, (6), (12)^2, (24)^2, (2, 2), (2, 4)^2, (2, 6), (2, 12)^2, (4, 4)$	150c7
(2)	$(4)^2, (6), (8)^4, (16)^3, (2, 2), (2, 4), (2, 8)^2, (4, 4)$	1470k6
(2)	$(4)^2, (6), (8)^3, (16)^3, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	195a7
(2)	$(4)^2, (6), (8)^4, (16)^4, (2, 2), (2, 4), (2, 8)^2, (4, 4)$	6720cd6
(2)	$(4)^2, (6), (8)^3, (16)^3, (2, 2), (2, 4)^2, (2, 8)^3, (4, 4)$	15a5
(2)	$(4)^2, (6), (8)^3, (16)^4, (2, 2), (2, 4)^2, (2, 8)^2, (4, 4)$	15a6
(2)	$(4)^2, (6), (8)^3, (16)^4, (2, 2), (2, 4)^2, (2, 8)^3, (4, 4)$	210e7

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(3)	(3, 3)	19a1
(3)	(15)	50a1
(4)	(8), (2, 12), (2, 24) ² , (4, 12)	150c3
(4)	(8), (12), (2, 4), (2, 8), (4, 8)	2880be6
(4)	(8), (12), (4, 4), (4, 8) ²	40a4
(4)	(12), (2, 4), (2, 8) ² , (4, 4)	200c1
(4)	(8), (12), (2, 4), (2, 8) ² , (4, 4)	17a1
(4)	(8), (12), (2, 4), (2, 20), (4, 4), (4, 8)	32a1
(4)	(8), (12), (2, 8), (2, 16) ² , (4, 8)	192c6
(4)	(8), (12), (16), (2, 4), (2, 8), (4, 8)	72a1
(4)	(12), (20), (2, 4), (2, 8) ² , (4, 4)	64a3
(4)	(8), (12), (2, 4), (2, 8) ² , (2, 16), (4, 4)	144b4
(4)	(8), (12), (2, 4), (2, 8), (2, 16) ² , (4, 8)	277440dv7
(4)	(8), (12), (16), (2, 4), (2, 8) ² , (4, 4)	63a5
(4)	(8), (12), (16), (2, 8), (2, 16) ² , (4, 8)	294c1
(4)	(8), (12), (20), (2, 4), (2, 8) ² , (4, 4)	32a4
(4)	(12), (24), (2, 4), (2, 8), (2, 12), (2, 24), (4, 4)	960o8
(4)	(8) ² , (12), (16) ² , (2, 4), (2, 8), (4, 8)	24a4
(4)	(8), (12), (16), (2, 4), (2, 8) ² , (2, 16), (4, 4)	75b8
(4)	(8), (12), (16) ² , (2, 4), (2, 8) ² , (4, 4)	40a3
(4)	(8), (12), (24), (2, 4), (2, 8) ² , (2, 12), (4, 4)	90c1
(4)	(8), (12), (24), (2, 4), (2, 8) ² , (2, 12), (4, 12)	720j8
(4)	(8), (12), (24), (2, 4), (2, 8), (2, 12), (2, 24), (4, 4)	1050k1
(4)	(8) ² , (12), (16), (2, 4), (2, 8) ² , (2, 16), (4, 4)	24a3
(4)	(8) ² , (12), (16) ² , (2, 4), (2, 8) ² , (4, 4)	120a1
(4)	(8) ² , (12), (16) ² , (2, 8), (2, 16) ² , (4, 8)	240d6
(4)	(8) ² , (12), (16) ² , (2, 4), (2, 8) ² , (2, 16), (4, 4)	21a4
(4)	(8) ² , (12), (16) ² , (2, 4), (2, 8) ² , (4, 4), (4, 8)	195a6
(4)	(8) ² , (12), (16) ² , (2, 4), (2, 8) ² , (4, 4), (4, 8) ²	510e6
(4)	(8) ² , (12), (16) ³ , (2, 4), (2, 8) ² , (2, 16), (4, 4)	195a1
(4)	(8) ² , (12), (16) ³ , (2, 4), (2, 8), (2, 16) ² , (4, 8)	1230f4
(4)	(8) ² , (12), (16) ² , (2, 4), (2, 8) ² , (2, 16) ² , (4, 4), (4, 8)	210e6
(4)	(8) ² , (12), (16) ³ , (32), (2, 4), (2, 8) ² , (2, 16), (4, 4)	15a7
(5)	(15)	11a3
(5)	(15), (5, 5)	11a1
(6)	(12), (2, 6), (4, 12)	36a1
(6)	(12), (2, 6), (2, 12) ²	14a4

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(6)	(12), (2, 6), (2, 12), (4, 12)	130a2
(6)	(12), (24), (2, 6), (2, 12) ²	130a1
(6)	(12), (2, 6), (2, 12) ² , (3, 6), (3, 12), (6, 6)	14a1
(6)	(12) ² , (24) ² , (2, 6), (2, 12) ²	30a1
(6)	(12) ² , (24) ² , (2, 6), (2, 12) ² , (2, 24)	90c8
(6)	(12) ² , (24) ² , (2, 6), (2, 12) ² , (4, 12)	90c7
(7)	(21)	26b1
(8)	(16), (24), (2, 8), (2, 16) ² , (4, 8)	15a4
(8)	(16) ² , (24), (32) ² , (2, 8), (2, 16) ² , (4, 8)	210e1
(10)	(20), (30), (2, 10), (2, 20) ²	66c1
(12)	(24), (2, 12), (2, 24) ² , (4, 12)	90c3
(2, 2)	(2, 4) ³ , (2, 6)	120b2
(2, 2)	(2, 4), (2, 6), (2, 8), (4, 4)	289a2
(2, 2)	(2, 4) ³ , (2, 6), (4, 4)	153c2
(2, 2)	(2, 4) ³ , (2, 6), (4, 8)	14400dq3
(2, 2)	(2, 4) ² , (2, 6), (2, 8), (4, 8)	277440dv6
(2, 2)	(2, 4) ² , (2, 6), (2, 12), (4, 12)	14400ef6
(2, 2)	(2, 4) ² , (2, 12), (2, 24), (4, 12)	960o6
(2, 2)	(2, 4), (2, 6), (2, 8), (4, 4), (4, 8)	200c2
(2, 2)	(2, 4), (2, 6), (2, 12) ² , (4, 12)	14400bo6
(2, 2)	(2, 4) ³ , (2, 6), (2, 8), (4, 4)	33a1
(2, 2)	(2, 4) ³ , (2, 6), (2, 8), (4, 8)	600a3
(2, 2)	(2, 4) ³ , (2, 6), (2, 10), (4, 4)	288d1
(2, 2)	(2, 4) ² , (2, 6), (2, 8) ² , (4, 4)	17a2
(2, 2)	(2, 4) ² , (2, 6), (2, 8) ² , (4, 8)	1200j4
(2, 2)	(2, 4) ² , (2, 6), (2, 8), (2, 16), (4, 8)	63a2
(2, 2)	(2, 4) ² , (2, 6), (2, 8), (4, 4), (4, 8)	2880be3
(2, 2)	(2, 4) ² , (2, 6), (2, 12) ³	30a6
(2, 2)	(2, 4), (2, 6), (2, 8), (2, 10), (4, 4), (4, 8)	64a1
(2, 2)	(2, 4) ³ , (2, 6), (2, 8) ² , (4, 4)	306c2
(2, 2)	(2, 4) ³ , (2, 6), (2, 8) ² , (4, 8)	192d2
(2, 2)	(2, 4) ³ , (2, 6), (2, 12) ³	210a6
(2, 2)	(2, 4) ² , (2, 6), (2, 8) ³ , (4, 4)	1287e4
(2, 2)	(2, 4) ² , (2, 6), (2, 8) ² , (2, 16), (4, 8)	1344g2
(2, 2)	(2, 4) ² , (2, 6), (2, 8) ² , (4, 4), (4, 8)	40a1
(2, 2)	(2, 4) ² , (2, 6), (2, 8), (2, 12) ² , (4, 12)	720j6
(2, 2)	(2, 4) ² , (2, 6), (2, 8), (2, 16) ² , (4, 8)	75b2

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(2, 2)	$(2, 4)^2, (2, 6), (2, 8), (2, 20), (4, 4), (4, 8)$	32a2
(2, 2)	$(2, 4)^2, (2, 6), (2, 8), (4, 4), (4, 8)^2$	72a2
(2, 2)	$(2, 4), (2, 6), (2, 8)^3, (2, 16), (4, 8)$	75b3
(2, 2)	$(2, 4), (2, 6), (2, 8)^2, (2, 16)^2, (4, 8)$	1470k2
(2, 2)	$(2, 4), (2, 6), (2, 8), (2, 12)^3, (4, 12)$	150c6
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^3, (4, 4)$	45a5
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^3, (4, 8)$	144b3
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^2, (2, 16), (4, 4)$	585f2
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^2, (2, 16), (4, 8)$	45a2
(2, 2)	$(2, 4)^3, (2, 6), (2, 8), (2, 16)^2, (4, 8)$	1200j2
(2, 2)	$(2, 4)^3, (2, 6), (2, 12)^3, (4, 4)$	14400bo2
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^4, (4, 4)$	2925g3
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^4, (4, 8)$	6150n3
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^3, (2, 16), (4, 8)$	294c4
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^3, (4, 4), (4, 8)$	63a4
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^2, (2, 16)^2, (4, 8)$	4800cd5
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^2, (2, 16), (4, 4), (4, 8)$	225c2
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^2, (4, 4), (4, 8)^2$	144b2
(2, 2)	$(2, 4)^2, (2, 6), (2, 8), (4, 4), (4, 8)^3$	1200j5
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (4, 4)$	231a3
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (4, 8)$	192c2
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^3, (2, 16), (4, 4)$	225c5
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^3, (4, 4), (4, 8)$	120a3
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^2, (4, 4), (4, 8)^2$	24a2
(2, 2)	$(2, 4)^3, (2, 6), (2, 8), (2, 12)^3, (4, 4)$	90c2
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^4, (4, 4), (4, 8)$	975a3
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^3, (2, 16)^2, (4, 8)$	1680p2
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^3, (4, 4), (4, 8)^2$	45a4
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^2, (4, 4), (4, 8)^3$	75b5
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (2, 16), (4, 4)$	1470k5
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (4, 4), (4, 8)$	21a2
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^3, (4, 4), (4, 8)^2$	42a3
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^4, (2, 16), (4, 4), (4, 8)$	3150bk4
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^4, (4, 4), (4, 8)^2$	630c4
(2, 2)	$(2, 4)^2, (2, 6), (2, 8)^3, (4, 4), (4, 8)^3$	1470k4
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (2, 16), (4, 4), (4, 8)$	1230f5
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^3, (4, 4), (4, 8)^3$	15a2

G	$\mathcal{H}_{\mathbb{Q}}(8, E)$	Label
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (2, 16)^2, (4, 4), (4, 8)$	240d2
(2, 2)	$(2, 4)^3, (2, 6), (2, 8)^4, (4, 4), (4, 8)^3$	210e5
(2, 4)	$(2, 8)^2, (2, 12), (4, 4)$	231a2
(2, 4)	$(2, 8)^2, (2, 12), (4, 4), (4, 8)$	120a2
(2, 4)	$(2, 8)^2, (2, 12), (2, 16), (4, 4), (4, 8)$	21a1
(2, 4)	$(2, 8)^2, (2, 12), (4, 4), (4, 8)^2$	24a1
(2, 4)	$(2, 8)^2, (2, 12), (2, 16)^3, (4, 8)$	1230f2
(2, 4)	$(2, 8)^2, (2, 12), (2, 16)^2, (4, 4), (4, 8)$	15a3
(2, 4)	$(2, 8)^2, (2, 12), (2, 16), (4, 4), (4, 8)^2$	42a2
(2, 4)	$(2, 8)^2, (2, 12), (4, 4), (4, 8)^3$	195a3
(2, 4)	$(2, 8), (2, 12), (2, 16), (4, 4), (4, 8)^3$	15a1
(2, 4)	$(2, 8)^2, (2, 12), (2, 16)^3, (4, 4), (4, 8)$	510e2
(2, 4)	$(2, 8)^2, (2, 12), (2, 16)^2, (4, 4), (4, 8)^3$	210e3
(2, 6)	$(2, 12)^3$	30a2
(2, 6)	$(2, 12)^3, (2, 24), (4, 12)$	90c6
(2, 8)	$(2, 16)^2, (2, 24), (4, 8)$	210e2