

$$d = 18$$

$$\Phi_{\mathbb{Q}}(18) \supseteq \left\{ \begin{array}{l} (2), (3), (4), (5), (6), (7), (8), (9), (10), (12), (13), (14), (15), (16), (18), (19), (21), (26), (27), (28), (30), (36), (42), (45), \\ (2, 2), (2, 4), (2, 6), (2, 8), (2, 10), (2, 12), (2, 14), (2, 18), (2, 26), (2, 36), (2, 42), \\ (3, 3), (3, 6), (3, 9), (3, 12), (3, 18), (3, 21), (4, 4), (4, 12), (4, 28), (6, 6), (6, 18), (7, 7), (9, 9) \end{array} \right\}$$

G	$\Phi_{\mathbb{Q}}(18, G) \setminus \{G\} \supseteq$
()	$\left\{ \begin{array}{l} (2), (3), (4), (5), (6), (7), (9), (10), (12), (13), (14), (15), (18), (19), (21), (26), (27), (28), (30), (42), (2, 2), (2, 6), \\ (2, 10), (2, 14), (2, 18), (2, 26), (2, 42), (3, 3), (3, 6), (3, 9), (3, 12), (3, 18), (3, 21), (4, 4), (4, 12), (4, 28), (6, 6), (6, 18), (7, 7), (9, 9) \end{array} \right\}$
(2)	$\{(4), (6), (8), (10), (12), (14), (16), (18), (36), (2, 2), (2, 6), (2, 10), (2, 14), (2, 18), (3, 6), (3, 12), (3, 18), (6, 6), (6, 18)\}$
(3)	$\{(6), (9), (12), (15), (18), (21), (27), (30), (42), (45), (2, 6), (2, 18), (2, 42), (3, 3), (3, 6), (3, 9), (3, 12), (3, 18), (3, 21), (4, 12), (6, 6), (6, 18), (9, 9)\}$
(4)	$\{(8), (12), (36), (2, 4), (2, 8), (2, 12), (2, 36), (3, 12), (4, 4)\}$
(5)	$\{(10), (15), (30), (45), (2, 10)\}$
(6)	$\{(12), (18), (36), (2, 6), (2, 18), (3, 6), (3, 12), (3, 18), (6, 6), (6, 18)\}$
(7)	$\{(14), (2, 14)\}$
(8)	$\{(16), (2, 8)\}$
(9)	$\{(18), (27), (2, 18), (3, 9), (3, 18)\}$
(10)	$\{(2, 10)\}$
(12)	$\{(36), (2, 12), (2, 36), (3, 12)\}$
(2, 2)	$\{(2, 4), (2, 6), (2, 8), (2, 12), (2, 18), (2, 36), (6, 6)\}$
(2, 4)	$\{(2, 8), (4, 4)\}$
(2, 6)	$\{(2, 12), (2, 18), (2, 36), (6, 6)\}$
(2, 8)	$\{\}$

$$h_{\mathbb{Q}}(18) \geq 17 \quad \#\mathcal{H}_{\mathbb{Q}}(18) \geq 192 \quad N_{\mathbb{Q}}(18) \geq 254016$$

G	$\mathcal{H}_{\mathbb{Q}}(18, E)$	Label
()	(2, 2)	392b1
()	(2, 14)	1922c1
()	(2), (2, 2)	11a2
()	(2, 2), (2, 14)	1922e1
()	(4), (4, 4)	648a1
()	(2), (5), (2, 10)	121d1
()	(2), (7), (2, 14)	10816bk1
()	(2), (19), (2, 2)	361a1
()	(7), (2, 2), (2, 14)	1922c2
()	(2), (4) ² , (2, 2)	648c1
()	(2), (5), (10), (2, 2)	75a2
()	(2), (7), (2, 2), (2, 14)	3249b1
()	(2), (7) ² , (2, 2)	2450a1
()	(2), (7), (14), (2, 2)	26b2
()	(2), (13), (2, 2), (2, 26)	441e1
()	(2), (13), (26), (2, 2)	147c1
()	(3), (6), (6, 6), (6, 18)	108a2
()	(3), (6), (9), (6, 6)	486a1
()	(4), (7), (4, 4), (4, 28)	2704e1
()	(4), (7), (28), (4, 4)	338b2
()	(2), (7), (14), (2, 2), (2, 14)	294a1
()	(2), (13), (26), (2, 2), (2, 26)	147b1
()	(4), (7), (28), (4, 4), (4, 28)	338b1
()	(2), (3) ² , (6), (9), (2, 6)	484a1
()	(2), (3), (6) ² , (9), (2, 2)	300a1
()	(2), (3), (6) ² , (18), (2, 2)	432b1
()	(2), (3), (6), (9), (27), (2, 18)	1728e3
()	(2), (4) ² , (7), (2, 2), (2, 14)	132496bu2
()	(2), (4) ² , (7), (14), (2, 2)	338a2
()	(2), (4) ² , (7), (28), (2, 2)	338a1
()	(2), (7) ² , (14), (2, 2), (7, 7)	2450ba1
()	(3) ² , (2, 2), (2, 6) ² , (2, 18)	196a1
()	(3) ² , (4), (9), (12), (4, 12)	1296h1
()	(3) ² , (9), (2, 2), (2, 6) ²	196a2
()	(2), (3) ² , (6) ² , (9), (2, 2)	50b3
()	(2), (3) ² , (6) ² , (18), (2, 2)	300a2
()	(2), (3) ² , (6), (9), (2, 2), (2, 6)	484a2

G	$\mathcal{H}_{\mathbb{Q}}(18, E)$	Label
()	(2), (3) ² , (6), (9), (2, 6), (2, 18)	361b1
()	(2), (3) ² , (6), (9) ² , (2, 6)	361b2
()	(2), (3), (6), (9), (18), (27), (2, 2)	432e3
()	(2), (3), (9), (18), (27), (2, 2), (2, 6)	1728j3
()	(3) ² , (2, 2), (2, 6) ² , (3, 3), (6, 18)	1764e1
()	(3) ² , (4), (9), (12), (4, 4), (4, 12)	1296h2
()	(2), (3) ² , (4) ² , (9), (12), (2, 6)	1296j1
()	(2), (3) ² , (4), (6), (9), (12), (2, 2)	4050g1
()	(2), (3) ² , (4), (9), (12), (2, 2), (2, 6)	1296j2
()	(2), (3) ² , (5), (6) ² , (9), (2, 10)	1600q1
()	(2), (3) ² , (5), (6), (9), (10), (2, 6)	1600v3
()	(2), (3) ² , (6), (2, 6), (2, 18), (3, 3), (6, 6)	300b2
()	(2), (3) ² , (6), (2, 6), (3, 3), (3, 9), (6, 6)	225b2
()	(2), (3) ² , (6) ² , (9) ² , (2, 2)	175b2
()	(2), (3) ² , (6) ² , (9), (18), (2, 2)	175b1
()	(2), (3) ² , (6), (7), (9), (14), (2, 6)	5184u3
()	(2), (3) ² , (6), (9), (2, 6), (3, 3), (6, 6)	540c2
()	(2), (3) ² , (6), (9) ² , (2, 2), (2, 6)	15552ch1
()	(2), (3) ² , (6), (9) ² , (2, 6), (2, 18)	1728e2
()	(2), (3) ² , (6), (9) ² , (18), (2, 6)	1728j1
()	(2), (3) ² , (6), (9), (18), (2, 2), (2, 6)	361b3
()	(2), (3) ² , (6), (9), (21), (2, 6), (2, 42)	5184u1
()	(3) ² , (2, 2), (2, 6) ² , (3, 3), (3, 9), (6, 6)	196b2
()	(3) ² , (9), (2, 2), (2, 6) ² , (3, 3), (6, 6)	324a2
()	(2), (3) ² , (4) ² , (6), (9), (12), (2, 2)	4050g2
()	(2), (3) ² , (5), (6) ² , (9), (10), (2, 2)	400b1
()	(2), (3) ² , (5), (6), (9), (10), (2, 2), (2, 6)	1600v4
()	(2), (3) ² , (6) ² , (2, 2), (2, 6), (3, 9), (3, 18)	486c2
()	(2), (3) ² , (6) ² , (7), (9), (2, 2), (2, 14)	254016dv3
()	(2), (3) ² , (6) ² , (7), (9), (14), (2, 2)	1296e3
()	(2), (3) ² , (6) ² , (9) ² , (18), (2, 2)	432a1
()	(2), (3) ² , (6) ² , (9), (18), (27), (2, 2)	432a2
()	(2), (3) ² , (6) ² , (9), (21), (42), (2, 2)	1296e1
()	(2), (3) ² , (6), (7), (9), (14), (2, 2), (2, 6)	5184u4
()	(2), (3) ² , (6), (7), (9), (14), (21), (2, 6)	5184bd1
()	(2), (3) ² , (6), (9), (2, 6), (3, 3), (6, 6), (9, 9)	243a1
()	(2), (3) ² , (6), (9) ² , (18), (2, 2), (2, 6)	1728e1

G	$\mathcal{H}_{\mathbb{Q}}(18, E)$	Label
()	(2), (3) ² , (6), (9), (21), (42), (2, 2), (2, 6)	5184bd2
()	(2), (4) ² , (7), (14), (28) ² , (2, 2), (2, 14)	16562be2
()	(2), (3) ² , (6) ² , (2, 2), (2, 6), (3, 3), (3, 6), (3, 9)	676c2
()	(2), (3) ² , (6) ² , (7), (9), (14), (21), (2, 2)	1296e2
()	(2), (3) ² , (6) ² , (9), (2, 2), (2, 6), (3, 3), (3, 6)	44a2
()	(2), (3) ² , (6), (7), (9), (21), (2, 2), (2, 6), (2, 14)	5184u2
()	(2), (3), (6), (9), (18), (27), (2, 2), (2, 6), (3, 9), (3, 18)	54a2
()	(3) ² , (4), (9), (12) ² , (3, 3), (3, 12), (4, 4), (4, 12)	162d2
()	(2), (3) ² , (4), (6), (9), (12) ² , (2, 2), (2, 6), (3, 3), (3, 12)	162a2
()	(2), (3) ² , (6) ² , (9), (2, 2), (2, 6), (3, 3), (3, 6), (3, 9) ²	486f2
()	(2), (3) ² , (6) ² , (7), (9), (14), (21), (2, 2), (2, 6), (3, 3), (3, 6)	162b4
()	(2), (3) ² , (6) ² , (7), (9), (14), (21) ² , (42), (2, 2), (2, 14)	7938u3
()	(2), (3) ² , (6) ² , (9), (21), (42), (2, 2), (2, 6), (3, 3), (3, 6), (3, 21)	162c2
()	(2), (3) ² , (5), (6) ² , (9), (10), (15), (30), (2, 2), (2, 6), (3, 3), (3, 6)	50a4
()	(2), (3) ² , (6) ² , (9) ² , (18) ² , (2, 2), (2, 6), (3, 3), (3, 6), (3, 9)	19a2
()	(2), (3) ² , (6), (9) ² , (27) ² , (2, 6), (2, 18) ² , (3, 3), (3, 9), (6, 6)	27a2
()	(2), (3) ² , (6) ² , (9) ³ , (18) ² , (2, 2), (2, 6), (3, 3), (3, 6), (3, 9) ²	54b2
()	(2), (3) ² , (6) ² , (7), (9), (14), (21) ² , (42), (2, 2), (2, 6), (2, 14), (3, 3), (3, 6), (3, 21)	162b2
(2)	(2, 2)	46a1
(2)	(2, 10)	450a3
(2)	(2, 2), (2, 14)	49a1
(2)	(10), (2, 2)	150b3
(2)	(14), (2, 2)	49a2
(2)	(4) ² , (2, 2)	15a5
(2)	(4), (8), (2, 2)	24a6
(2)	(4), (16), (2, 2)	3150bk1
(2)	(6), (2, 6), (2, 18)	80b1
(2)	(8) ² , (2, 2)	2880r6
(2)	(14), (2, 2), (2, 14)	49a3
(2)	(6), (2, 6), (2, 18), (6, 6)	84a3
(2)	(6), (2, 6), (6, 6), (6, 18)	36a3
(2)	(6) ² , (18), (2, 2)	80b2
(2)	(6), (18), (2, 2), (2, 6)	80b3
(2)	(6), (18), (2, 6), (2, 18)	98a3
(2)	(4) ² , (6), (2, 6), (2, 18)	960o7
(2)	(4) ² , (12), (2, 6), (2, 18)	450g1
(2)	(4), (6), (12), (36), (2, 2)	240b3

G	$\mathcal{H}_{\mathbb{Q}}(18, E)$	Label
(2)	(4), (12), (36), (2, 2), (2, 6)	450g3
(2)	(6) ² , (18) ² , (2, 2)	98a4
(2)	(4) ² , (6) ² , (18), (2, 2)	150c4
(2)	(4) ² , (6), (12), (18), (2, 2)	240b1
(2)	(4) ² , (6), (18), (2, 2), (2, 6)	960o4
(2)	(6) ² , (2, 2), (2, 6), (3, 6), (3, 18)	36a4
(2)	(6) ² , (18), (2, 2), (2, 6), (3, 6)	20a3
(2)	(4), (6), (12) ² , (36), (2, 2), (2, 6), (3, 12)	30a3
(2)	(6) ² , (18) ² , (2, 2), (2, 6), (3, 6), (3, 18)	14a3
(2)	(4) ² , (6) ² , (12) ² , (18), (2, 2), (2, 6), (3, 6)	30a7
(3)	(6), (9), (6, 6)	300b1
(3)	(2, 6), (2, 18), (3, 3), (6, 18)	196b1
(3)	(6), (18), (6, 6), (6, 18)	108a1
(3)	(9), (2, 6), (3, 3), (6, 6)	324a1
(3)	(6), (9), (2, 6), (3, 3), (3, 6)	44a1
(3)	(6), (9), (2, 6), (3, 3), (6, 6)	540c1
(3)	(9), (2, 6), (3, 3), (3, 9), (6, 6)	1764e2
(3)	(9), (12), (3, 3), (3, 12), (4, 12)	162d1
(3)	(6), (9), (2, 6), (3, 3), (3, 6), (3, 9)	676c1
(3)	(6), (9), (2, 6), (3, 3), (3, 9), (6, 6)	225b1
(3)	(6), (9), (2, 6), (3, 3), (6, 6), (9, 9)	243a2
(3)	(6), (18), (2, 6), (2, 18), (3, 3), (6, 6)	486a2
(3)	(6), (9), (2, 6), (3, 3), (3, 6), (3, 9) ²	486c1
(3)	(6), (9), (3, 3), (3, 9), (6, 6), (6, 18), (9, 9)	27a1
(3)	(6), (9), (12) ² , (2, 6), (3, 3), (3, 12)	162a1
(3)	(6), (9), (18), (2, 6), (2, 18), (3, 9), (3, 18)	486f1
(3)	(6), (9), (21), (42), (2, 6), (3, 3), (3, 6)	162b3
(3)	(6), (9), (2, 6), (3, 3), (3, 6), (3, 9) ³	19a1
(3)	(6), (9), (15), (30), (45), (2, 6), (3, 3), (3, 6)	50a3
(3)	(6), (9), (18), (3, 3), (3, 9), (6, 6), (6, 18), (9, 9)	27a3
(3)	(6), (9), (21), (42), (2, 6), (3, 3), (3, 6), (3, 21)	162c1
(3)	(6), (9), (2, 6), (3, 3), (3, 6), (3, 9) ³ , (3, 18)	54a1
(3)	(6), (9), (21), (42), (2, 6), (2, 42), (3, 3), (3, 6), (3, 21)	162b1
(3)	(6), (9) ² , (18) ² , (2, 6), (2, 18), (3, 3), (3, 6), (3, 9)	19a3
(3)	(6), (9) ² , (18) ² , (2, 6), (2, 18), (3, 3), (3, 6), (3, 9) ²	54a3
(3)	(6), (9), (18), (2, 6), (2, 18), (3, 3), (3, 6), (3, 9) ³ , (3, 18)	54b1
(3)	(6), (9) ² , (18), (27) ² , (2, 6), (2, 18) ² , (3, 3), (3, 9), (6, 6)	27a4

G	$\mathcal{H}_{\mathbb{Q}}(18, E)$	Label
(4)	(2, 4)	17a1
(4)	(2, 8)	192c6
(4)	(4, 4)	40a4
(4)	$(8)^2, (2, 4)$	15a7
(4)	$(8)^2, (2, 8)$	240d6
(4)	(12), (2, 12), (2, 36)	150c3
(4)	$(12)^2, (36), (2, 4)$	720j5
(4)	(12), (36), (2, 4), (2, 12)	150c1
(4)	$(12)^2, (36), (2, 4), (2, 12), (3, 12)$	90c1
(5)	(10), (2, 10)	11a1
(5)	(10), $(15)^2, (30)^2, (45), (2, 10)$	50b1
(6)	(18), (2, 6), (2, 18), (3, 6)	20a1
(6)	(18), (2, 6), (2, 18), (6, 6)	84a1
(6)	(18), (2, 6), (6, 6), (6, 18)	36a1
(6)	(18), (2, 6), (2, 18), (3, 6), (3, 18)	36a2
(6)	$(18)^2, (2, 6), (2, 18), (3, 6), (3, 18)$	14a4
(6)	(18), (2, 6), (2, 18), (3, 6), $(3, 18)^3$	14a1
(6)	$(12)^2, (18), (36)^2, (2, 6), (2, 18), (3, 6)$	30a4
(6)	$(12)^2, (18), (36)^2, (2, 6), (2, 18), (3, 12)$	30a1
(7)	(14), (2, 14)	26b1
(8)	(2, 8)	15a4
(8)	$(16)^2, (2, 8)$	210e1
(9)	(18), (27), (2, 18), (3, 9), (3, 18)	54b3
(10)	(2, 10)	66c1
(12)	(36), (2, 12), (2, 36), (3, 12)	90c3
(2, 2)	(2, 4)	33a1
(2, 2)	(2, 8)	63a2
(2, 2)	$(2, 4)^2$	17a2
(2, 2)	(2, 4), (2, 8)	75b3
(2, 2)	$(2, 4)^3$	15a2
(2, 2)	$(2, 4)^2, (2, 8)$	510e5
(2, 2)	$(2, 6)^2, (2, 18)$	240b2
(2, 2)	(2, 6), (2, 12), (2, 36)	960o6
(2, 2)	(2, 4), $(2, 6)^2, (2, 18)$	150c2
(2, 2)	(2, 4), (2, 6), (2, 12), (2, 18)	960o2
(2, 2)	$(2, 6)^2, (2, 18), (6, 6)$	30a6
(2, 2)	(2, 4), $(2, 6)^2, (2, 12), (2, 18), (6, 6)$	90c2

G	$\mathcal{H}_{\mathbb{Q}}(18, E)$	Label
(2, 4)	(2, 8)	15a3
(2, 4)	(4, 4)	195a3
(2, 4)	$(2, 8)^2$	1230f2
(2, 4)	(2, 8), (4, 4)	15a1
(2, 4)	$(2, 8)^2, (4, 4)$	210e3
(2, 6)	(2, 18), (6, 6)	30a2
(2, 6)	(2, 12), (2, 18), (2, 36), (6, 6)	90c6