$HS.2$

$4^3 : L_3(2)$ $\leq 4^3 : (L_3(2) \times 2)$	8250	$1a^{\pm} + 22a^{\pm} + 77a^{\pm} + 154a^{\pm} + 175a^{\pm} +$ $693a^{\pm} + 770a^{\pm} + 825a^{\pm} + 1408a^{\pm}$	18

Character Numbers: [1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 14, 15, 16, 17, 19, 20, 26, 27]

	S_1	S_2	S_3	S_4	S_5	S_6	S_7	S_8	S_9	S_{10}	S_{11}	S_{12}	S_{13}	S_{14}	S_{15}	S_{16}	S_{17}	S_{18}
χ_1	1	1	28	28	64	64	112	112	336	336	448	448	896	896	896	896	1344	1344
χ_2	1	−1	28	−28	−64	64	−112	112	−336	336	−448	448	−896	896	−896	896	1344	−1344
χ_3	1	1	−7	−7	−36	−36	42	42	−84	−84	168	168	56	−224	−224	56	84	84
χ_4	1	−1	−7	7	36	−36	−42	42	84	−84	−168	168	−56	−224	224	56	84	−84
χ_5	1	1	13	13	14	14	32	32	6	6	28	28	−164	16	16	−164	54	54
χ_6	1	−1	13	−13	−14	14	−32	32	−6	6	−28	28	164	16	−16	−164	54	−54
χ_7	1	1	13	13	4	4	22	22	36	36	−32	−32	56	−64	−64	56	−36	−36
χ_8	1	−1	13	−13	−4	4	−22	22	−36	36	32	−32	−56	−64	64	56	−36	36
χ_9	1	1	−5	−5	20	20	2	2	6	6	52	52	16	16	16	16	−108	−108
χ_{10}	1	−1	−5	5	−20	20	−2	2	−6	6	−52	52	−16	16	−16	16	−108	108
χ_{11}	1	1	3	3	4	4	2	2	−34	−34	−12	−12	16	16	16	16	4	4
χ_{12}	1	−1	3	−3	−4	4	−2	2	34	−34	12	−12	−16	16	−16	16	4	−4
χ_{13}	1	1	−7	−7	−6	−6	12	12	6	6	−12	−12	−4	16	16	−4	−6	−6
χ_{14}	1	−1	−7	7	6	−6	−12	12	−6	6	12	−12	4	16	−16	−4	−6	6
χ_{15}	1	1	5	5	−10	−10	−8	−8	6	6	12	12	−4	16	16	−4	−18	−18
χ_{16}	1	−1	5	−5	10	−10	8	−8	−6	6	−12	12	4	16	−16	−4	−18	18
χ_{17}	1	1	−2	−2	4	4	−8	−8	6	6	−2	−2	−4	−19	−19	−4	24	24
χ_{18}	1	−1	−2	2	−4	4	8	−8	−6	6	2	−2	4	−19	19	−4	24	−24

Ramanujan Graphs: [2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2,

3, 4, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [
2, 3, 4, 5, 7, 8, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3,
4, 5, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2,
3, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3,
4, 5, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3,
4, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6,
7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6,
8, 9, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 6,
11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 7, 8,
13, 14, 15, 16, 17, 18], [2, 3, 4, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 7, 13, 14, 15,
16, 17, 18], [2, 3, 4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 8, 13, 14, 15, 16, 17, 18], [
2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 4, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6,
7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 7,
9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 8,
9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 9,
10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 7, 8, 9, 10,
11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 7, 8, 13, 14, 15, 16, 17, 18], [2, 3, 5, 7, 9, 10, 11, 12, 13,
14, 15, 16, 17, 18], [2, 3, 5, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 8, 9, 10, 11, 12, 13, 14,
15, 16, 17, 18], [2, 3, 5, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 5, 9, 10, 11, 12, 13, 14, 15, 16,
17, 18], [2, 3, 5, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
], [2, 3, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 6,
7, 9, 12, 13, 14, 15, 16, 17, 18], [2, 3, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 6, 8, 9, 11, 12,
13, 14, 15, 16, 17, 18], [2, 3, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 6, 11, 12, 13, 14, 15,
16, 17, 18], [2, 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 7, 8, 13, 14, 15, 16, 17, 18], [
2, 3, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 3, 7, 13, 14, 15, 16, 17, 18], [2, 3, 8, 9, 10, 11,
12, 13, 14, 15, 16, 17, 18], [2, 3, 8, 13, 14, 15, 16, 17, 18], [2, 3, 9, 10, 11, 12, 13, 14, 15, 16,
17, 18], [2, 3, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

], [2, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2,
4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2,
4, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4,
5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5,
7, 8, 13, 14, 15, 16, 17, 18], [2, 4, 5, 7, 9, 11, 13, 15, 18], [2, 4, 5, 7, 9, 13, 18], [2, 4, 5, 7, 10,
11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 7, 11, 13, 15, 18], [2, 4, 5, 7, 13, 15, 18], [2, 4, 5, 8, 9,
10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 8, 10, 11, 13, 14, 15, 16, 17, 18], [2, 4, 5, 8, 11, 12,
13, 14, 15, 16, 17, 18], [2, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 9, 11, 13, 15, 18],
[2, 4, 5, 9, 13, 18], [2, 4, 5, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 5, 11, 13, 15, 18], [2, 4, 6, 7,
8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 4, 6, 7, 9, 10,
11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 6, 8, 9, 10, 11,
12, 13, 14, 15, 16, 17, 18], [2, 4, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 6, 9, 10, 11, 12, 13,
14, 15, 16, 17, 18], [2, 4, 6, 11, 12, 13, 14, 15, 16, 17, 18], [2, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15,
16, 17, 18], [2, 4, 7, 8, 13, 14, 15, 16, 17, 18], [2, 4, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2,
4, 7, 9, 11, 13, 15], [2, 4, 7, 9, 11, 13, 15, 18], [2, 4, 7, 9, 13, 18], [2, 4, 7, 11, 13, 15], [2, 4,
7, 11, 13, 15, 18], [2, 4, 7, 13, 14, 15, 16, 17, 18], [2, 4, 7, 13, 15, 18], [2, 4, 8, 9, 10, 11, 12,
13, 14, 15, 16, 17, 18], [2, 4, 8, 13, 14, 15, 16, 17, 18], [2, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
], [2, 4, 9, 11, 13, 15], [2, 4, 9, 11, 13, 15, 18], [2, 4, 9, 13, 18], [2, 4, 11, 12, 13, 14, 15, 16,
17, 18], [2, 4, 11, 13, 15, 18], [2, 4, 13, 15, 18], [2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,
18], [2, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5,
6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 6, 8,
11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 6, 11, 12, 13,
14, 15, 16, 17, 18], [2, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 7, 8, 13, 14, 15, 16,
17, 18], [2, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 7, 9, 11, 13, 15, 18], [2, 5, 7, 9, 13,
18], [2, 5, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 7, 11, 13, 15, 18], [2, 5, 7, 13, 15, 18], [
2, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 9,
11, 13, 15, 18], [2, 5, 9, 13, 18], [2, 5, 9, 18], [2, 5, 11, 12, 13, 14, 15, 16, 17, 18], [2, 5, 11,

13, 15, 18], [2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 6, 7, 8, 13, 14, 15, 16, 17, 18], [2, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18], [2, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 6, 11, 12, 13, 14, 15, 16, 17, 18], [2, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 7, 8, 13, 14, 15, 16, 17, 18], [2, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 7, 9, 11, 13, 15], [2, 7, 9, 11, 13, 15, 18], [2, 7, 9, 13, 18], [2, 7, 11, 13, 15], [2, 7, 13, 14, 15, 16, 17, 18], [2, 7, 13, 15, 18], [2, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 8, 13, 14, 15, 16, 17, 18], [2, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [2, 9, 11, 13, 15, 18], [2, 9, 11, 15, 18], [2, 11, 12, 13, 14, 15, 16, 17, 18], [2, 11, 13, 15, 18], [2, 13, 15, 18], [3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 7, 8, 13, 14, 15, 16, 17, 18], [3, 4, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 5, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 7, 8, 13, 14, 15, 16, 17, 18], [3, 4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 6, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 7, 8, 13, 14, 15, 16, 17, 18], [3, 4, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 7, 13, 14, 15, 16, 17, 18], [3, 4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 8, 13, 14, 15, 16, 17, 18], [3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 4, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18], [3, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 7, 8, 13, 14, 15, 16, 17, 18], [3, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 7, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 8, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 5, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 7, 8, 13, 14, 15, 16, 17, 18], [3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 7, 9, 12, 13, 14, 15, 16, 17, 18], [3, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 8, 10, 12, 14, 16, 17], [3, 6, 8, 10, 16, 17], [3, 6, 8, 12, 14, 16, 17], [3, 6, 8, 14, 16, 17], [3, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 10, 12, 14, 16, 17], [3, 6, 10, 16, 17], [3, 6, 11, 12, 13, 14, 15, 16, 17, 18], [3, 6, 12, 14, 16, 17], [3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 7, 8, 13, 14, 15, 16, 17, 18], [3, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 7, 13, 14, 15, 16, 17, 18], [3, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 8, 10, 12, 14, 16], [3, 8, 10, 12, 14, 16, 17], [3, 8, 10, 16, 17], [3, 8, 12, 14, 16], [3, 8, 12, 14, 16, 17], [3, 8, 13, 14, 15, 16, 17, 18], [3, 8, 14, 16, 17], [3, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [3, 10, 12, 14, 16], [3, 10, 12, 14, 16, 17], [3, 10, 16, 17], [3, 11, 12, 13, 14, 15, 16, 17, 18], [3, 12, 14, 16, 17], [3, 14, 16, 17], [4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18], [4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 7, 8, 13, 14, 15, 16, 17, 18], [4, 5, 7, 9, 11, 13, 15, 18], [4, 5, 7, 9, 13, 18], [4, 5, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 7, 11, 13, 15, 18], [4, 5, 7, 13, 15, 18], [4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 8, 10, 11, 13, 14, 15, 16, 17, 18], [4, 5, 8, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 9, 11, 13, 15, 18], [4, 5, 9, 13, 18], [4, 5, 11, 12, 13, 14, 15, 16, 17, 18], [4, 5, 11, 13, 15, 18], [4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 6, 7, 8, 13, 14, 15, 16, 17, 18], [4, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 6, 11, 12, 13, 14, 15, 16, 17, 18], [4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 7, 8, 13, 14, 15, 16, 17, 18], [4, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 7, 9, 11, 13, 15], [4, 7, 9, 11, 13, 15, 18], [4, 7, 9, 13, 18], [4, 7, 11, 13, 15], [4, 7, 11, 13, 15, 18], [4, 7, 13, 14, 15, 16, 17, 18], [4, 7, 13, 15, 18], [4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 8, 13, 14, 15, 16, 17, 18], [4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [4, 9, 11, 13, 15], [4, 9, 11, 13, 15, 18], [4, 9, 13, 18], [4, 11, 12, 13, 14, 15, 16, 17, 18], [4, 11, 13, 15, 18], [4, 13, 15, 18], [5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 6, 7, 8, 13, 14, 15, 16, 17, 18], [5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 6, 7, 11, 12, 13, 14, 15, 16, 17, 18], [5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 18], [5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 6, 11, 12, 13, 14, 15, 16, 17, 18], [5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 7, 8, 13, 14, 15, 16, 17, 18], [5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 7, 9, 11, 13, 15, 18], [5, 7, 9, 13, 18], [5, 7, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 7, 11, 13, 15, 18], [5, 7, 13, 15, 18], [5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [5, 9, 11, 13, 15, 18], [5, 9, 13, 18], [5, 9, 18], [5, 11, 12, 13, 14, 15, 16, 17, 18], [5, 11, 13, 15, 18], [6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [6, 7, 8, 13, 14, 15, 16, 17, 18], [6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [6, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18], [6, 8, 10, 12, 14, 16, 17], [6, 8, 10, 16, 17], [6, 8, 12, 14, 16, 17], [6, 8, 14, 16, 17], [6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [6, 10, 12, 14, 16, 17], [6, 10, 16, 17], [6, 10, 17], [6, 11, 12, 13, 14, 15, 16, 17, 18], [6, 12, 14, 16, 17], [7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [7, 8, 13, 14, 15, 16, 17, 18], [7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [7, 9, 11, 13, 15], [7, 9, 11, 13, 15, 18], [7, 9, 13, 18], [7, 11, 13, 15], [7, 11, 15], [7, 13, 14, 15, 16, 17, 18], [7, 13, 15, 18], [8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [8, 10, 12, 14, 16], [8, 10, 12, 14, 16, 17], [8, 10, 16, 17], [8, 12, 14], [8, 12, 14, 16], [8, 13, 14, 15, 16, 17, 18], [8, 14, 16, 17], [9, 10, 11, 12, 13, 14, 15, 16, 17, 18], [9, 11, 13, 15, 18], [9, 11, 15, 18], [10, 12, 14, 16, 17], [10, 12, 14, 17], [11, 12, 13, 14, 15, 16, 17, 18], [11, 13, 15, 18], [12, 14, 16, 17], [13, 15, 18], [14, 16, 17]