This document lists the edge sets of all graphs  $H_1, \ldots, H_{17}, H_{18}$ . We suppose without loss of generality that  $V(H_i) = \{1, \ldots, 58\}$  for all  $1 \le i \le 18$ . Here  $H_1, \ldots, H_{17}$  have cop number 3 and attacking cop number 6, while we were only able to verify that  $H_{18}$  has cop number at least 4 and attacking cop number at least 6.

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 $\frac{H_5:}{46)} E = \{ (1, 3), (1, 8), (1, 10), (1, 27), (1, 49), (1, 57), (3, 5), (3, 16), (3, 18), (3, 27), (3, 46), (8, 6), (8, 10), (8, 33), (8, 41), (8, 43), (10, 12), (10, 21), (10, 23), (10, 37), (27, 25), (27, 29), (27, 36), (27, 53), (49, 15), (49, 35), (49, 47), (49, 51), (49, 57), (57, 30), (57, 38), (57, 40), (57, 55), (2, 4), (2, 9), (2, 17), (2, 26), (2, 28), (2, 58), (4, 6), (4, 17), (4, 38), (4, 45), (4, 47), (9, 7), (9, 11), (9, 22), (9, 42), (9, 58), (17, 15), (17, 19), (17, 41), (17, 55), (26, 24), (26, 28), (26, 40), (26, 52), (26, 54), (28, 30), (28, 35), (28, 37), (28, 43), (58, 39), (58, 48), (58, 50), (58, 56), (5, 7), (5, 37), (5, 39), (5, 46), (5, 52), (16, 14), (16, 18), (16, 40), (16, 42), (16, 50), (18, 20), (18, 34), (18, 54), (18, 56), (46, 13), (46, 24), (46, 44), (46, 48), (6, 33), (6, 38), (6, 51), (6, 53), (38, 11), (38, 36), (38, 40), (45, 12), (45, 14), (45, 20), (45, 43), (45, 47), (47, 23), (47, 25), (47, 35), (7, 32), (7, 34), (7, 42), (7, 52), (37, 12), (37, 35), (37, 39), (39, 25), (39, 41), (39, 56), (52, 21), (52, 50), (52, 54), (33, 14), (33, 19), (33, 31), (33, 35), (51, 15), (51, 20), (51, 22), (51, 53), (53, 12), (53, 25), (53, 55), (32, 13), (32, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (32, 23), (32, 30), (32, 34), (34, 20), (34, 36), (34, 48), (42, 29), (42, 40), (42, 44), (41, 15), (42, 41), (42, 41), (42, 41)$ 

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(41, 25), (41, 43), (43, 20), (43, 30), (11, 13), (11, 22), (11, 36), (11, 54), (22, 20), (22, 24), (22, 31), (12, 14), (12, 55), (21, 19), (21, 23), (21, 44), (21, 50), (23, 25), (23, 30), (13, 15), (13, 44), (13, 54), (36, 29), (36, 48), (54, 56), (14, 31), (14, 50), (55, 19), (55, 30), (44, 19), (44, 29), (31, 24), (31, 29), (31, 56), (50, 48), (40, 24), (19, 35), (56, 29), (24, 48)
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 $H_6$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 26), (1, 37), (1, 57), (3, 5), (3, 13), (3, 37), (3, 47),$ 49), (8, 6), (8, 10), (8, 19), (8, 50), (8, 52), (10, 12), (10, 29), (10, 31), (10, 40), (26, 17), (26, 24), (26, 28), (26, 45), (26, 57), (37, 35), (37, 39), (37, 44), (37, 53), (57, 32), (57, 34),(57, 42), (57, 55), (2, 4), (2, 9), (2, 36), (2, 38), (2, 48), (2, 58), (4, 6), (4, 12), (4, 14), (428), (4, 48), (9, 7), (9, 11), (9, 30), (9, 51), (9, 58), (36, 23), (36, 34), (36, 38), (36, 43), (36,45), (38, 18), (38, 40), (38, 52), (38, 54), (48, 32), (48, 41), (48, 46), (48, 50), (58, 25), (58, 26)(27), (58, 33), (58, 56), (5, 7), (5, 13), (5, 27), (5, 29), (5, 34), (13, 11), (13, 15), (13, 22), (13, 52), (47, 20), (47, 31), (47, 33), (47, 45), (47, 49), (49, 24), (49, 40), (49, 42), (49, 51),(6, 19), (6, 28), (6, 33), (6, 35), (12, 14), (12, 21), (12, 23), (12, 40), (14, 16), (14, 43), (14, 16)51), (14, 53), (28, 30), (28, 45), (28, 54), (7, 18), (7, 20), (7, 34), (7, 51), (27, 25), (27, 29), (27, 44), (27, 46), (29, 31), (29, 53), (29, 55), (34, 23), (34, 32), (19, 17), (19, 21), (19, 39),(19, 46), (33, 31), (33, 35), (33, 56), (35, 22), (35, 24), (35, 44), (18, 16), (18, 20), (18, 25),(18, 40), (20, 22), (20, 45), (20, 55), (51, 24), (51, 53), (50, 23), (50, 25), (50, 41), (50, 52),(52, 15), (52, 54), (11, 22), (11, 30), (11, 39), (11, 41), (30, 16), (30, 32), (30, 54), (31, 15),(31, 17), (40, 42), (22, 24), (22, 55), (39, 17), (39, 41), (39, 53), (41, 43), (41, 56), (21, 23),(21, 46), (21, 54), (21, 56), (23, 25), (15, 17), (15, 42), (15, 44), (16, 25), (16, 32), (16, 43),(43, 45), (43, 56), (53, 55), (17, 24), (42, 44), (42, 55), (44, 46), (32, 46), (54, 56)

 $H_7$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 45), (1, 50), (1, 57), (3, 5), (3, 37), (3, 39), (3, 45),$ 54), (8, 6), (8, 10), (8, 25), (8, 30), (8, 32), (10, 12), (10, 18), (10, 20), (10, 40), (45, 24), (45, 33), (45, 43), (45, 47), (50, 15), (50, 41), (50, 48), (50, 52), (50, 57), (57, 27), (57, 34),(57, 36), (57, 55), (2, 4), (2, 9), (2, 38), (2, 44), (2, 46), (2, 58), (4, 6), (4, 13), (4, 38), (4, 60)53), (4, 55), (9, 7), (9, 11), (9, 19), (9, 31), (9, 58), (38, 16), (38, 26), (38, 36), (38, 40), (44, 55)17), (44, 23), (44, 25), (44, 42), (44, 46), (46, 20), (46, 32), (46, 34), (46, 48), (58, 35), (58, 36)49), (58, 51), (58, 56), (5, 7), (5, 12), (5, 14), (5, 48), (5, 54), (37, 15), (37, 17), (37, 22), (37, 35), (37, 39), (39, 11), (39, 25), (39, 27), (39, 41), (54, 18), (54, 23), (54, 52), (54, 56),(6, 13), (6, 25), (6, 47), (6, 49), (13, 11), (13, 15), (13, 28), (13, 34), (53, 22), (53, 24), (53, 24), (53, 24), (54, 25), (54, 25), (54, 25), (55, 26)32), (53, 51), (53, 55), (55, 17), (55, 19), (55, 27), (7, 24), (7, 26), (7, 31), (7, 48), (12, 14), (12, 33), (12, 35), (12, 40), (14, 16), (14, 27), (14, 29), (14, 51), (48, 20), (48, 41), (25, 23),(25, 27), (47, 19), (47, 21), (47, 33), (47, 49), (49, 40), (49, 42), (49, 51), (24, 22), (24, 26),(24, 43), (26, 28), (26, 40), (26, 56), (31, 29), (31, 33), (31, 42), (31, 52), (30, 21), (30, 28),(30, 32), (30, 41), (30, 43), (32, 34), (32, 51), (11, 19), (11, 34), (11, 41), (19, 17), (19, 21),(18, 16), (18, 20), (18, 43), (18, 56), (20, 22), (20, 29), (40, 42), (34, 36), (41, 43), (33, 35),(33, 52), (35, 22), (35, 56), (15, 17), (15, 28), (15, 52), (28, 21), (28, 56), (16, 36), (16, 43),(16, 51), (27, 29), (29, 22), (29, 42), (17, 42), (52, 23), (36, 21), (36, 23), (21, 23)

 $\underline{H_8}$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 28), (1, 33), (1, 57), (3, 5), (3, 25), (3, 33), (3, 38), (3, 40), (8, 6), (8, 10), (8, 19), (8, 41), (8, 43), (10, 12), (10, 37), (10, 50), (10, 52), (28, 20), (28, 26), (28, 30), (28, 36), (28, 57), (33, 16), (33, 22), (33, 31), (33, 35), (57, 17), (57, 47), (57, 49), (57, 55), (2, 4), (2, 9), (2, 32), (2, 34), (2, 39), (2, 58), (4, 6), (4, 24), (4, 26), (4$ 

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 $H_9$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 42), (1, 52), (1, 57), (3, 5), (3, 13), (3, 22), (3, 24),$ 52), (8, 6), (8, 10), (8, 37), (8, 39), (8, 46), (10, 12), (10, 20), (10, 28), (10, 30), (42, 14), (42, 33), (42, 40), (42, 44), (42, 57), (52, 19), (52, 45), (52, 50), (52, 54), (57, 26), (57, 47),(57, 49), (57, 55), (2, 4), (2, 9), (2, 23), (2, 51), (2, 53), (2, 58), (4, 6), (4, 12), (4, 14), (4(23), (4, 34), (9, 7), (9, 11), (9, 29), (9, 38), (9, 58), (23, 21), (23, 25), (23, 40), (23, 47), (51, 23)18), (51, 20), (51, 39), (51, 49), (51, 53), (53, 32), (53, 44), (53, 46), (53, 55), (58, 41)43), (58, 48), (58, 56), (5, 7), (5, 13), (5, 18), (5, 33), (5, 35), (13, 11), (13, 15), (13, 43), (13, 55), (22, 20), (22, 24), (22, 36), (22, 46), (22, 48), (24, 17), (24, 26), (24, 39), (24, 41),(6, 17), (6, 19), (6, 34), (6, 46), (12, 14), (12, 20), (12, 54), (12, 56), (14, 16), (14, 37), (14, 16)44), (34, 27), (34, 32), (34, 36), (34, 41), (7, 18), (7, 38), (7, 45), (7, 47), (18, 16), (18, 20), (18, 25), (33, 31), (33, 35), (33, 40), (33, 54), (35, 21), (35, 26), (35, 28), (35, 37), (17, 15),(17, 19), (17, 26), (17, 31), (19, 11), (19, 21), (19, 50), (46, 44), (46, 48), (38, 15), (38, 36),(38, 40), (38, 50), (45, 28), (45, 43), (45, 47), (45, 54), (47, 21), (47, 49), (37, 16), (37, 21),(37, 39), (39, 41), (39, 49), (11, 21), (11, 29), (11, 55), (29, 27), (29, 31), (29, 44), (29, 49),(20, 36), (28, 26), (28, 30), (28, 43), (30, 16), (30, 32), (30, 48), (30, 50), (55, 26), (55, 32),(54, 31), (54, 56), (56, 25), (56, 27), (56, 48), (15, 31), (15, 36), (15, 43), (43, 41), (16, 25),(16, 32), (44, 27), (31, 49), (36, 27), (25, 27), (25, 40), (32, 41), (50, 40), (50, 48)

 $\frac{H_{10}:}{41,} E = \{ (1, 3), (1, 8), (1, 10), (1, 41), (1, 49), (1, 57), (3, 5), (3, 28), (3, 33), (3, 35), (3, 41), (8, 6), (8, 10), (8, 21), (8, 23), (8, 45), (10, 12), (10, 27), (10, 52), (10, 54), (41, 14), (41, 20), (41, 39), (41, 43), (49, 13), (49, 25), (49, 47), (49, 51), (49, 57), (57, 29), (57, 31), (57, 36), (57, 55), (2, 4), (2, 9), (2, 34), (2, 40), (2, 42), (2, 58), (4, 6), (4, 17), (4, 27), (4, 29), (4, 34), (9, 7), (9, 11), (9, 22), (9, 53), (9, 58), (34, 23), (34, 32), (34, 36), (34, 46), (40, 19), (40, 21), (40, 38), (40, 42), (40, 51), (42, 13), (42, 15), (42, 44), (42, 55), (58, 30), (58, 48), (58, 50), (58, 56), (5, 7), (5, 16), (5, 18), (5, 28), (5, 38), (28, 11), (28, 21), (28, 26), (28, 30), (33, 31), (33, 35), (33, 45), (33, 47), (33, 52), (35, 22), (35, 24), (35, 37), (35, 56), (6, 17), (6, 37), (6, 39), (6, 45), (17, 15), (17, 19), (17, 24), (17, 54), (27, 12), (27, 25), (27, 29), (27, 44), (29, 20), (29, 22), (29, 31), (7, 22), (7, 38), (7, 44), (7, 46), (16, 14), (16, 18), (16, 23), (16, 25), (16, 31), (18, 20), (18, 47), (18, 53), (18, 55), (38, 12), (38, 36), (38, 51), (37, 11), (37, 13), (37, 39), (37, 56), (39, 20), (39, 50), (39, 52), (45, 26), (45, 43), (45, 47), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (44, 25), (44, 46), (44, 55), (46, 19), (46, 32), (46, 48), (21, 19), (21, 23), (22, 20), (22, 24), (22, 20), (22, 24), (24, 25), (24, 26), (24, 25), (24, 26), (24, 26), (24, 26), (24, 26), (24, 26), (24,$ 

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 $H_{11}$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 15), (1, 30), (1, 57), (3, 5), (3, 15), (3, 37), (3, 39$ 49), (8, 6), (8, 10), (8, 34), (8, 40), (8, 42), (10, 12), (10, 21), (10, 23), (10, 48), (15, 13), (15, 17), (15, 33), (15, 43), (30, 19), (30, 28), (30, 32), (30, 52), (30, 57), (57, 25), (57, 45),(57, 47), (57, 55), (2, 4), (2, 9), (2, 14), (2, 16), (2, 38), (2, 58), (4, 6), (4, 20), (4, 38), (4, 6)(4, 50), (9, 7), (9, 11), (9, 22), (9, 41), (9, 58), (14, 12), (14, 16), (14, 28), (14, 42), (44), (16, 18), (16, 32), (16, 34), (16, 47), (38, 24), (38, 36), (38, 40), (38, 53), (58, 29)31), (58, 46), (58, 56), (5, 7), (5, 19), (5, 21), (5, 49), (5, 55), (37, 35), (37, 39), (37, 45), (37, 52), (37, 54), (39, 18), (39, 23), (39, 25), (39, 41), (49, 11), (49, 26), (49, 47), (49, 51),(6, 20), (6, 34), (6, 54), (6, 56), (20, 18), (20, 22), (20, 29), (20, 44), (48, 12), (48, 17), (48, 18)46), (48, 50), (50, 25), (50, 27), (50, 42), (50, 52), (7, 33), (7, 35), (7, 41), (7, 55), (19, 17), (19, 21), (19, 28), (19, 40), (21, 23), (21, 43), (21, 45), (55, 12), (55, 25), (55, 53), (34, 27),(34, 32), (34, 36), (54, 11), (54, 13), (54, 52), (54, 56), (56, 24), (56, 26), (56, 46), (33, 17),(33, 23), (33, 31), (33, 35), (35, 26), (35, 28), (35, 45), (41, 18), (41, 43), (41, 51), (40, 17),(40, 24), (40, 42), (42, 44), (42, 52), (11, 13), (11, 22), (11, 47), (22, 24), (22, 32), (22, 44),(12, 28), (12, 53), (23, 25), (23, 31), (13, 27), (13, 29), (13, 43), (47, 18), (47, 45), (28, 26),(53, 31), (53, 36), (53, 51), (27, 25), (27, 29), (27, 36), (29, 18), (29, 31), (43, 45), (43, 51),(44, 36), (44, 46), (17, 46), (32, 24), (32, 52), (46, 36), (24, 26), (31, 51), (26, 51)

 $H_{12}$ :  $E = \{1, 3\}, (1, 8), (1, 10), (1, 35), (1, 41), (1, 57), (3, 5), (3, 13), (3, 15), (3, 41),$ 46), (8, 6), (8, 10), (8, 22), (8, 24), (8, 38), (10, 12), (10, 27), (10, 29), (10, 52), (35, 26), (35, 33), (35, 37), (35, 44), (35, 57), (41, 19), (41, 39), (41, 43), (41, 49), (57, 16), (57, 18),(57, 30), (57, 55), (2, 4), (2, 9), (2, 14), (2, 40), (2, 42), (2, 58), (4, 6), (4, 14), (4, 33), (4, 6)45), (4, 47), (9, 7), (9, 11), (9, 23), (9, 28), (9, 58), (14, 12), (14, 16), (14, 24), (14, 37), (40, 40)38), (40, 42), (40, 48), (40, 50), (40, 55), (42, 18), (42, 20), (42, 29), (42, 44), (58, 17), (58, 18), (40, 42), (40, 48)34), (58, 36), (58, 56), (5, 7), (5, 18), (5, 32), (5, 34), (5, 46), (13, 11), (13, 15), (13, 20), (13, 36), (13, 38), (15, 17), (15, 23), (15, 25), (15, 50), (46, 21), (46, 44), (46, 48), (46, 53),(6, 17), (6, 19), (6, 33), (6, 38), (33, 26), (33, 31), (33, 51), (45, 36), (45, 43), (45, 47), (45, 47), (45, 48)52), (45, 54), (47, 20), (47, 22), (47, 27), (47, 49), (7, 18), (7, 23), (7, 37), (7, 39), (18, 16), (18, 20), (32, 22), (32, 30), (32, 34), (32, 50), (32, 52), (34, 25), (34, 27), (34, 36), (17, 19),(17, 50), (17, 56), (19, 12), (19, 21), (19, 43), (38, 36), (38, 55), (23, 21), (23, 25), (23, 31),(37, 12), (37, 39), (37, 44), (39, 49), (39, 54), (39, 56), (22, 20), (22, 24), (22, 30), (24, 16),(24, 26), (24, 54), (11, 20), (11, 28), (11, 51), (11, 53), (28, 26), (28, 30), (28, 43), (28, 48),(12, 21), (12, 52), (27, 25), (27, 29), (27, 49), (29, 31), (29, 44), (29, 56), (52, 50), (52, 54),(51, 16), (51, 31), (51, 49), (51, 53), (53, 25), (53, 44), (53, 55), (21, 31), (21, 48), (36, 43),(16, 49), (25, 55), (50, 48), (56, 31), (56, 54), (43, 30), (48, 26), (30, 55), (26, 54)

 $\underline{H_{13}}$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 15), (1, 33), (1, 57), (3, 5), (3, 24), (3, 33), (3, 40), (3, 42), (8, 6), (8, 10), (8, 30), (8, 37), (8, 39), (10, 12), (10, 18), (10, 20), (10, 53), (15, 13), (15, 17), (15, 22), (15, 36), (15, 57), (33, 21), (33, 31), (33, 35), (33, 46), (57, 25), (57, 43), (57, 45), (57, 55), (2, 4), (2, 9), (2, 32), (2, 34), (2, 41), (2, 58), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 6), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 23), (4, 17), (4, 27), (4$ 

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25), (4, 41), (9, 7), (9, 11), (9, 19), (9, 38), (9, 58), (32, 20), (32, 22), (32, 30), (32, 34), (32, 55), (34, 36), (34, 45), (34, 47), (34, 52), (41, 28), (41, 39), (41, 43), (41, 54), (58, 14), (58, 16), (58, 44), (58, 56), (5, 7), (5, 16), (5, 18), (5, 24), (5, 45), (24, 22), (24, 26), (24, 51), (24, 56), (40, 38), (40, 42), (40, 48), (40, 53), (40, 55), (42, 20), (42, 27), (42, 29), (42, 44), (6, 17), (6, 30), (6, 44), (6, 46), (17, 19), (17, 36), (17, 49), (23, 14), (23, 21), (23, 25), (23, 50), (23, 52), (25, 27), (25, 37), (25, 55), (7, 29), (7, 31), (7, 38), (7, 45), (16, 14), (16, 18), (16, 35), (16, 37), (18, 20), (18, 48), (18, 50), (45, 43), (45, 47), (30, 28), (30, 50), (30, 55), (44, 20), (44, 46), (44, 56), (46, 13), (46, 35), (46, 48), (29, 27), (29, 31), (29, 49), (29, 51), (31, 21), (31, 54), (31, 56), (38, 26), (38, 36), (38, 48), (37, 27), (37, 35), (37, 39), (39, 47), (39, 49), (39, 54), (11, 13), (11, 19), (11, 27), (11, 52), (11, 54), (19, 21), (19, 43), (19, 49), (12, 14), (12, 26), (12, 28), (12, 47), (12, 53), (20, 22), (53, 35), (53, 51), (53, 55), (13, 22), (13, 27), (13, 48), (52, 36), (52, 50), (52, 54), (54, 56), (14, 21), (14, 47), (26, 28), (26, 36), (26, 56), (28, 43), (28, 50), (47, 49), (22, 51), (48, 50), (21, 43), (35, 51), (49, 51) \}
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 $H_{14}$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 15), (1, 27), (1, 57), (3, 5), (3, 27), (3, 40), (3, 42$ 50), (8, 6), (8, 10), (8, 20), (8, 46), (8, 48), (10, 12), (10, 35), (10, 51), (10, 53), (15, 13), (15, 17), (15, 24), (15, 49), (15, 57), (27, 19), (27, 25), (27, 29), (27, 54), (57, 32), (57, 43),(57, 45), (57, 55), (2, 4), (2, 9), (2, 26), (2, 28), (2, 41), (2, 58), (4, 6), (4, 36), (4, 41), (4, 42)49, (4, 51), (9, 7), (9, 11), (9, 47), (9, 52), (9, 58), (26, 24), (26, 28), (26, 46), (26, 53), (26, 54)55), (28, 13), (28, 18), (28, 20), (28, 30), (41, 12), (41, 17), (41, 39), (41, 43), (58, 14), (58, 16), (58, 44), (58, 56), (5, 7), (5, 35), (5, 37), (5, 50), (5, 55), (40, 16), (40, 18), (40, 38), (40, 42), (40, 53), (42, 11), (42, 13), (42, 21), (42, 44), (50, 14), (50, 22), (50, 48), (50, 52),(6, 20), (6, 36), (6, 54), (6, 56), (36, 11), (36, 34), (36, 38), (36, 45), (49, 13), (49, 33), (49, 36)47, (49, 51), (51, 21), (51, 23), (51, 53), (7, 19), (7, 21), (7, 47), (7, 55), (35, 12), (35, 18), (35, 33), (35, 37), (37, 30), (37, 39), (37, 44), (37, 46), (55, 32), (55, 53), (20, 18), (20, 22),(20, 43), (54, 25), (54, 39), (54, 52), (54, 56), (56, 31), (56, 33), (56, 44), (19, 17), (19, 21),(19, 29), (19, 34), (21, 23), (21, 44), (47, 25), (47, 33), (47, 45), (46, 24), (46, 44), (46, 48),(48, 14), (48, 32), (48, 34), (11, 13), (11, 34), (11, 52), (52, 22), (52, 39), (12, 14), (12, 29),(12, 43), (53, 38), (13, 30), (34, 17), (34, 32), (14, 16), (14, 29), (29, 31), (29, 38), (43, 22),(43, 45), (30, 23), (30, 32), (30, 39), (16, 18), (16, 23), (16, 25), (17, 24), (17, 39), (24, 22),(24, 31), (18, 33), (23, 25), (23, 32), (25, 45), (33, 31), (22, 31), (31, 38), (45, 38)

 $\frac{H_{15}:}{52}; E = \{ (1, 3), (1, 8), (1, 10), (1, 22), (1, 35), (1, 57), (3, 5), (3, 22), (3, 45), (3, 50), (3, 52), (8, 6), (8, 10), (8, 47), (8, 49), (8, 54), (10, 12), (10, 19), (10, 41), (10, 43), (22, 15), (22, 20), (22, 24), (22, 30), (35, 18), (35, 33), (35, 37), (35, 44), (35, 57), (57, 25), (57, 27), (57, 40), (57, 55), (2, 4), (2, 9), (2, 21), (2, 23), (2, 51), (2, 58), (4, 6), (4, 17), (4, 44), (4, 46), (4, 51), (9, 7), (9, 11), (9, 42), (9, 48), (9, 58), (21, 19), (21, 23), (21, 29), (21, 31), (21, 55), (23, 14), (23, 16), (23, 25), (23, 43), (51, 33), (51, 38), (51, 49), (51, 53), (58, 26), (58, 34), (58, 36), (58, 56), (5, 7), (5, 16), (5, 18), (5, 28), (5, 45), (45, 13), (45, 36), (45, 43), (45, 47), (50, 25), (50, 37), (50, 39), (50, 48), (50, 52), (52, 14), (52, 32), (52, 34), (52, 54), (6, 17), (6, 27), (6, 29), (6, 54), (17, 15), (17, 19), (17, 34), (17, 39), (44, 24), (44, 37), (44, 42), (44, 46), (46, 12), (46, 14), (46, 31), (46, 48), (7, 28), (7, 48), (7, 53), (7, 55), (16, 14), (16, 18), (16, 38), (16, 40), (18, 11), (18, 20), (18, 33), (28, 12), (28, 26), (28, 30), (28, 37), (27, 11), (27, 13), (27, 25), (27, 29), (29, 31), (29, 36), (29, 38), (54, 14), (54, 20), (54, 56), (48, 25), (48, 31), (53, 13), (53, 15), (53, 33), (53, 55), (55, 19), (55, 40), (47, 13), (47, 30), (47, 30), (48, 25), (48, 31), (53, 13), (53, 15), (53, 33), (53, 55), (55, 19), (55, 40), (47, 13), (47, 30), (47, 30), (47, 30), (48, 25), (48, 31), (53, 13), (53, 15), (53, 33), (53, 55), (55, 19), (55, 40), (47, 13), (47, 30), (47, 30), (47, 30), (48, 25), (48, 31), (53, 13), (53, 15), (53, 33), (53, 55), (55, 19), (55, 40), (47, 13), (47, 30), (47, 30), (47, 30), (47, 30), (47, 30), (47, 30), (47, 30), (47, 30), (47, 30), (48, 25), (48, 31), (53, 13), (53, 15), (53, 33), (53, 55), (55, 19), (55, 40), (47, 13), (47, 30), (47, 30), (48, 25), (48, 31), (53, 15), (53, 33), (53, 55), (55, 19), (55, 40), (47, 13), (47, 30), (47, 13), (47, 30), (48, 25), (48, 25), (48, 21), (48, 20), (48, 25), (48, 21), (48, 20), (48,$ 

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(47, 32), (47, 49), (49, 24), (49, 26), (49, 38), (11, 13), (11, 20), (11, 42), (42, 24), (42, 32), (42, 40), (12, 14), (12, 19), (12, 26), (19, 34), (41, 31), (41, 33), (41, 39), (41, 43), (41, 56), (43, 25), (43, 36), (13, 15), (20, 30), (20, 56), (26, 24), (26, 56), (15, 24), (15, 39), (39, 37), (39, 56), (38, 36), (38, 40), (40, 32), (34, 32), (34, 36), (33, 31), (30, 32), (30, 37)
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 $H_{16}$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 18), (1, 50), (1, 57), (3, 5), (3, 31), (3, 37), (3, 39), (3, 37), (3, 38$ 50), (8, 6), (8, 10), (8, 27), (8, 29), (8, 45), (10, 12), (10, 21), (10, 32), (10, 34), (18, 16), (18, 20), (18, 30), (18, 41), (18, 57), (50, 14), (50, 42), (50, 48), (50, 52), (57, 23), (57, 25),(57, 44), (57, 55), (2, 4), (2, 9), (2, 38), (2, 49), (2, 51), (2, 58), (4, 6), (4, 23), (4, 30), (4, 40), (432), (4, 38), (9, 7), (9, 11), (9, 28), (9, 33), (9, 58), (38, 12), (38, 36), (38, 40), (38, 46), (49, 49)(49, 15), (49, 26), (49, 47), (49, 51), (51, 22), (51, 41), (51, 43), (51, 53), (58, 17), (58,19), (58, 24), (58, 56), (5, 7), (5, 15), (5, 22), (5, 24), (5, 31), (31, 19), (31, 29), (31, 33), (31, 43), (37, 35), (37, 39), (37, 45), (37, 47), (37, 53), (39, 11), (39, 13), (39, 27), (39, 41),(6, 14), (6, 16), (6, 23), (6, 45), (23, 21), (23, 25), (23, 52), (30, 20), (30, 28), (30, 32)54), (32, 34), (32, 42), (32, 44), (7, 15), (7, 28), (7, 44), (7, 46), (15, 13), (15, 17), (15, 35), (22, 11), (22, 20), (22, 24), (22, 53), (24, 26), (24, 34), (24, 56), (14, 12), (14, 16), (14, 48),(14, 55), (16, 34), (16, 36), (16, 41), (45, 43), (45, 47), (45, 56), (28, 26), (28, 40), (28, 54),(44, 42), (44, 46), (44, 55), (46, 20), (46, 36), (46, 48), (27, 25), (27, 29), (27, 41), (27, 48),(29, 19), (29, 53), (29, 55), (11, 13), (11, 20), (11, 33), (33, 25), (33, 35), (33, 43), (12, 21),(12, 40), (12, 55), (21, 19), (21, 47), (21, 52), (34, 26), (34, 36), (13, 54), (13, 56), (20, 48),(40, 17), (40, 26), (40, 42), (55, 53), (54, 36), (54, 52), (54, 56), (56, 43), (48, 25), (17, 19),(17, 35), (17, 42), (35, 25), (35, 53), (36, 52), (41, 43), (19, 47), (42, 52), (47, 26)

 $H_{17}$ :  $E = \{ (1, 3), (1, 8), (1, 10), (1, 26), (1, 48), (1, 57), (3, 5), (3, 21), (3, 26), (3, 34), (3, 26), (3, 36$ 36), (8, 6), (8, 10), (8, 31), (8, 51), (8, 53), (10, 12), (10, 19), (10, 42), (10, 44), (26, 14), (26, 24), (26, 28), (26, 39), (48, 30), (48, 40), (48, 46), (48, 50), (48, 57), (57, 16), (57, 18),(57, 33), (57, 55), (2, 4), (2, 9), (2, 25), (2, 27), (2, 35), (2, 58), (4, 6), (4, 20), (4, 22), (4, 20), (435), (4, 41), (9, 7), (9, 11), (9, 43), (9, 52), (9, 58), (25, 23), (25, 27), (25, 32), (25, 38), (25,(40), (27, 13), (27, 15), (27, 29), (27, 54), (35, 12), (35, 33), (35, 37), (35, 46), (58, 17)47), (58, 49), (58, 56), (5, 7), (5, 16), (5, 21), (5, 40), (5, 42), (21, 19), (21, 23), (21, 29), (21, 51), (34, 11), (34, 13), (34, 32), (34, 36), (34, 56), (36, 38), (36, 45), (36, 47), (36, 53),(6, 15), (6, 17), (6, 31), (6, 41), (20, 11), (20, 18), (20, 22), (20, 28), (20, 30), (22, 24), (22, 24), (23, 24), (24, 24), (25, 24), (25, 24), (26, 27), (26, 28)44), (22, 50), (22, 52), (41, 39), (41, 43), (41, 49), (41, 55), (7, 16), (7, 30), (7, 32), (7, 52), (16, 14), (16, 18), (16, 45), (40, 38), (40, 42), (40, 50), (42, 44), (42, 54), (42, 56), (15, 13),(15, 17), (15, 44), (15, 46), (17, 19), (17, 38), (17, 56), (31, 24), (31, 29), (31, 33), (31, 47),(30, 28), (30, 32), (30, 46), (32, 23), (32, 56), (52, 37), (52, 50), (52, 54), (51, 13), (51, 23),(51, 49), (51, 53), (53, 28), (53, 38), (53, 55), (11, 13), (11, 18), (11, 43), (43, 23), (43, 45),(43, 55), (12, 14), (12, 19), (12, 33), (12, 50), (19, 29), (19, 38), (44, 24), (44, 46), (13, 49),(18, 37), (18, 39), (14, 28), (14, 45), (14, 50), (33, 24), (33, 55), (49, 39), (49, 47), (28, 55),(45, 23), (45, 47), (46, 37), (56, 54), (37, 39), (37, 54), (39, 24), (29, 47), (29, 54)

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