

List of Starters for GBTDs

An $(\mathbb{Z}_{17} \times [3])$ -GBTD-starter:

$$\begin{aligned}
 A_0 &= \{12_3, 2_2, 15_1\} & A_1 &= \{8_1, 15_3, 11_2\} & A_2 &= \{11_1, 2_3, 6_2\} \\
 A_3 &= \{15_2, 12_2, 0_2\} & A_4 &= \{4_1, 7_3, 5_2\} & A_5 &= \{14_2, 10_2, 4_2\} \\
 A_6 &= \{3_1, 16_1, 10_1\} & A_7 &= \{9_3, 5_3, 16_3\} & A_8 &= \{10_3, 0_1, 1_3\} \\
 A_9 &= \{16_2, 6_3, 7_2\} & A_{10} &= \{6_1, 13_2, 14_1\} & A_{11} &= \{8_2, 14_3, 9_2\} \\
 A_{12} &= \{12_1, 1_2, 13_1\} & A_{13} &= \{3_3, 9_1, 4_3\} & A_{14} &= \{5_1, 2_1, 7_1\} \\
 A_{15} &= \{11_3, 8_3, 13_3\} & A_{16} &= \{0_3, 3_2, 1_1\} & B_1 &= \{0_2, 3_1, 1_3\} \\
 B_2 &= \{16_1, 5_3, 7_2\} & B_3 &= \{4_3, 10_2, 12_1\} & B_4 &= \{0_2, 6_1, 8_3\} \\
 B_5 &= \{13_2, 3_1, 16_3\} & B_6 &= \{0_3, 8_2, 12_1\} & B_7 &= \{11_2, 2_1, 6_3\} \\
 B_8 &= \{11_1, 11_2, 11_3\}
 \end{aligned}$$

An $(\mathbb{Z}_{29} \times [3])$ -GBTD-starter:

$$\begin{aligned}
 A_0 &= \{14_3, 6_1, 7_3\} & A_1 &= \{24_2, 16_3, 17_2\} & A_2 &= \{5_1, 26_2, 27_1\} \\
 A_3 &= \{11_3, 16_2, 15_2\} & A_4 &= \{21_2, 26_1, 25_1\} & A_5 &= \{4_1, 9_3, 8_3\} \\
 A_6 &= \{0_2, 4_2, 13_2\} & A_7 &= \{10_1, 14_1, 23_1\} & A_8 &= \{20_3, 24_3, 4_3\} \\
 A_9 &= \{19_1, 24_1, 22_2\} & A_{10} &= \{25_3, 1_3, 28_1\} & A_{11} &= \{3_1, 1_1, 18_1\} \\
 A_{12} &= \{23_2, 28_2, 26_3\} & A_{13} &= \{17_3, 15_3, 3_3\} & A_{14} &= \{5_2, 3_2, 20_2\} \\
 A_{15} &= \{0_1, 11_1, 8_1\} & A_{16} &= \{10_3, 21_3, 18_3\} & A_{17} &= \{28_3, 22_3, 12_2\} \\
 A_{18} &= \{19_2, 1_2, 27_2\} & A_{19} &= \{10_2, 9_1, 0_3\} & A_{20} &= \{2_2, 25_2, 15_1\} \\
 A_{21} &= \{20_1, 13_3, 11_2\} & A_{22} &= \{22_1, 16_1, 6_3\} & A_{23} &= \{17_1, 12_3, 2_3\} \\
 A_{24} &= \{27_3, 9_2, 12_1\} & A_{25} &= \{14_2, 7_1, 5_3\} & A_{26} &= \{7_2, 2_1, 21_1\} \\
 A_{27} &= \{13_1, 19_3, 6_2\} & A_{28} &= \{23_3, 18_2, 8_2\} & B_1 &= \{17_1, 0_3, 25_2\} \\
 B_2 &= \{22_3, 5_2, 1_1\} & B_3 &= \{4_2, 16_1, 12_3\} & B_4 &= \{2_1, 1_3, 21_2\} \\
 B_5 &= \{1_3, 0_2, 20_1\} & B_6 &= \{12_1, 23_3, 26_2\} & B_7 &= \{3_2, 14_1, 17_3\} \\
 B_8 &= \{6_3, 28_2, 26_1\} & B_9 &= \{4_1, 27_3, 15_2\} & B_{10} &= \{28_3, 22_2, 10_1\} \\
 B_{11} &= \{15_2, 9_1, 26_3\} & B_{12} &= \{20_3, 26_2, 13_1\} & B_{13} &= \{2_2, 8_1, 24_3\} \\
 B_{14} &= \{27_1, 27_2, 27_3\}
 \end{aligned}$$

An $(\mathbb{Z}_{35} \times [3])$ -GBTD-starter:

$$\begin{aligned}
 A_0 &= \{26_2, 3_1, 30_3\} & A_1 &= \{24_2, 16_2, 0_2\} & A_2 &= \{33_3, 11_2, 8_1\} \\
 A_3 &= \{9_2, 25_1, 10_3\} & A_4 &= \{24_3, 25_2, 16_1\} & A_5 &= \{15_2, 9_1, 28_3\} \\
 A_6 &= \{24_1, 26_3, 1_2\} & A_7 &= \{17_1, 11_3, 30_2\} & A_8 &= \{34_3, 5_2, 20_1\} \\
 A_9 &= \{9_3, 2_1, 32_3\} & A_{10} &= \{22_2, 15_3, 10_2\} & A_{11} &= \{27_1, 20_2, 15_1\} \\
 A_{12} &= \{27_2, 14_2, 32_1\} & A_{13} &= \{7_1, 29_1, 12_3\} & A_{14} &= \{13_3, 0_3, 18_2\} \\
 A_{15} &= \{30_1, 28_1, 4_3\} & A_{16} &= \{20_3, 18_3, 29_2\} & A_{17} &= \{4_2, 2_2, 13_1\} \\
 A_{18} &= \{17_2, 31_2, 34_2\} & A_{19} &= \{19_1, 33_1, 1_1\} & A_{20} &= \{5_1, 3_3, 29_3\} \\
 A_{21} &= \{5_3, 19_3, 22_3\} & A_{22} &= \{33_2, 31_1, 22_1\} & A_{23} &= \{23_3, 21_2, 12_2\} \\
 A_{24} &= \{21_1, 26_1, 11_1\} & A_{25} &= \{16_3, 21_3, 6_3\} & A_{26} &= \{3_2, 8_2, 28_2\} \\
 A_{27} &= \{6_1, 0_1, 34_1\} & A_{28} &= \{14_3, 8_3, 7_3\} & A_{29} &= \{2_3, 23_2, 19_2\} \\
 A_{30} &= \{10_1, 31_3, 27_3\} & A_{31} &= \{13_2, 7_2, 6_2\} & A_{32} &= \{32_2, 18_1, 14_1\} \\
 A_{33} &= \{25_3, 17_3, 1_3\} & A_{34} &= \{12_1, 4_1, 23_1\} & B_1 &= \{27_2, 5_1, 2_3\} \\
 B_2 &= \{9_1, 22_3, 19_2\} & B_3 &= \{34_1, 5_3, 20_2\} & B_4 &= \{27_2, 33_1, 13_3\} \\
 B_5 &= \{32_1, 9_3, 1_2\} & B_6 &= \{6_3, 18_2, 10_1\} & B_7 &= \{12_3, 14_2, 24_1\} \\
 B_8 &= \{5_2, 7_1, 17_3\} & B_9 &= \{21_1, 24_3, 28_2\} & B_{10} &= \{29_3, 32_2, 1_1\} \\
 B_{11} &= \{8_2, 11_1, 15_3\} & B_{12} &= \{30_1, 11_3, 31_2\} & B_{13} &= \{22_3, 3_2, 23_1\} \\
 B_{14} &= \{13_3, 7_2, 26_1\} & B_{15} &= \{27_1, 28_3, 19_2\} & B_{16} &= \{18_2, 19_1, 10_3\} \\
 B_{17} &= \{25_1, 25_2, 25_3\}
 \end{aligned}$$

An $(\mathbb{Z}_{47} \times [3])$ -GBTD-starter:

$$\begin{aligned}
 A_0 &= \{32_3, 31_1, 0_3\} & A_1 &= \{10_2, 37_2, 21_2\} & A_2 &= \{9_1, 2_1, 30_1\} \\
 A_3 &= \{4_1, 13_1, 36_3\} & A_4 &= \{38_3, 46_2, 16_1\} & A_5 &= \{45_2, 14_3, 8_2\} \\
 A_6 &= \{34_3, 38_1, 28_3\} & A_7 &= \{28_1, 19_3, 29_2\} & A_8 &= \{5_1, 18_1, 22_1\} \\
 A_9 &= \{9_2, 13_3, 3_2\} & A_{10} &= \{16_3, 17_3, 42_2\} & A_{11} &= \{33_3, 46_3, 3_3\} \\
 A_{12} &= \{22_3, 2_2, 26_2\} & A_{13} &= \{34_1, 42_3, 12_2\} & A_{14} &= \{25_1, 24_2, 40_1\} \\
 A_{15} &= \{29_3, 9_3, 40_3\} & A_{16} &= \{28_2, 8_1, 32_1\} & A_{17} &= \{32_2, 15_1, 8_3\} \\
 A_{18} &= \{20_3, 41_2, 6_1\} & A_{19} &= \{23_3, 4_2, 10_1\} & A_{20} &= \{16_2, 17_2, 42_1\} \\
 A_{21} &= \{3_1, 36_1, 11_1\} & A_{22} &= \{33_2, 38_2, 36_2\} & A_{23} &= \{14_2, 0_2, 22_2\} \\
 A_{24} &= \{41_3, 27_3, 2_3\} & A_{25} &= \{43_3, 31_3, 45_1\} & A_{26} &= \{29_1, 17_1, 31_2\} \\
 A_{27} &= \{25_2, 12_1, 7_2\} & A_{28} &= \{11_3, 27_1, 21_3\} & A_{29} &= \{0_1, 1_1, 26_3\} \\
 A_{30} &= \{39_1, 43_2, 33_1\} & A_{31} &= \{37_1, 24_3, 19_1\} & A_{32} &= \{13_2, 1_2, 15_3\} \\
 A_{33} &= \{26_1, 45_3, 34_2\} & A_{34} &= \{6_3, 40_2, 35_3\} & A_{35} &= \{41_1, 46_1, 44_1\} \\
 A_{36} &= \{27_2, 35_1, 5_3\} & A_{37} &= \{18_2, 11_2, 39_2\} & A_{38} &= \{14_1, 30_2, 24_1\} \\
 A_{39} &= \{7_3, 12_3, 10_3\} & A_{40} &= \{6_2, 19_2, 23_2\} & A_{41} &= \{35_2, 44_2, 20_1\} \\
 A_{42} &= \{43_1, 23_1, 7_1\} & A_{43} &= \{5_2, 4_3, 20_2\} & A_{44} &= \{30_3, 39_3, 15_2\} \\
 A_{45} &= \{21_1, 1_3, 25_3\} & A_{46} &= \{44_3, 37_3, 18_3\} & B_1 &= \{42_1, 15_3, 33_2\} \\
 B_2 &= \{46_3, 19_2, 37_1\} & B_3 &= \{23_2, 43_1, 14_3\} & B_4 &= \{16_1, 31_3, 19_2\} \\
 B_5 &= \{2_3, 17_2, 5_1\} & B_6 &= \{25_2, 40_1, 28_3\} & B_7 &= \{30_1, 11_3, 17_2\} \\
 B_8 &= \{44_2, 25_1, 31_3\} & B_9 &= \{24_1, 26_3, 29_2\} & B_{10} &= \{29_3, 31_2, 34_1\} \\
 B_{11} &= \{0_2, 2_1, 5_3\} & B_{12} &= \{35_3, 7_2, 43_1\} & B_{13} &= \{8_2, 27_1, 16_3\} \\
 B_{14} &= \{0_1, 21_3, 33_2\} & B_{15} &= \{34_2, 8_1, 20_3\} & B_{16} &= \{43_3, 34_2, 44_1\} \\
 B_{17} &= \{4_2, 42_1, 5_3\} & B_{18} &= \{4_1, 34_3, 27_2\} & B_{19} &= \{37_3, 20_2, 13_1\} \\
 B_{20} &= \{17_1, 24_3, 35_2\} & B_{21} &= \{23_3, 30_2, 41_1\} & B_{22} &= \{42_2, 2_1, 13_3\} \\
 B_{23} &= \{36_1, 36_2, 36_3\}
 \end{aligned}$$

An $(\mathbb{Z}_{53} \times [3])$ -GBTD-starter:

$$\begin{aligned}
 A_0 &= \{22_1, 23_2, 30_2\} & A_1 &= \{38_1, 7_1, 30_1\} & A_2 &= \{48_2, 1_1, 36_1\} \\
 A_3 &= \{10_2, 5_1, 27_2\} & A_4 &= \{12_3, 50_2, 23_1\} & A_5 &= \{8_1, 14_3, 49_3\} \\
 A_6 &= \{14_1, 4_3, 16_2\} & A_7 &= \{38_2, 52_2, 2_3\} & A_8 &= \{47_2, 20_2, 22_2\} \\
 A_9 &= \{18_1, 46_3, 12_1\} & A_{10} &= \{13_3, 39_3, 41_3\} & A_{11} &= \{15_2, 2_2, 44_2\} \\
 A_{12} &= \{9_3, 18_2, 48_1\} & A_{13} &= \{33_3, 48_3, 13_1\} & A_{14} &= \{51_1, 24_1, 26_1\} \\
 A_{15} &= \{8_3, 22_3, 25_1\} & A_{16} &= \{30_3, 17_3, 6_3\} & A_{17} &= \{36_2, 40_1, 42_3\} \\
 A_{18} &= \{47_1, 37_1, 3_1\} & A_{19} &= \{51_3, 21_2, 34_1\} & A_{20} &= \{19_3, 7_3, 23_3\} \\
 A_{21} &= \{29_2, 17_2, 33_2\} & A_{22} &= \{35_2, 44_3, 11_1\} & A_{23} &= \{3_2, 34_3, 27_1\} \\
 A_{24} &= \{28_2, 29_3, 36_3\} & A_{25} &= \{32_1, 46_1, 49_2\} & A_{26} &= \{16_1, 49_1, 17_1\} \\
 A_{27} &= \{25_2, 5_2, 26_2\} & A_{28} &= \{15_1, 47_3, 10_1\} & A_{29} &= \{2_1, 43_1, 6_1\} \\
 A_{30} &= \{9_2, 41_1, 4_2\} & A_{31} &= \{39_1, 43_3, 45_2\} & A_{32} &= \{21_3, 0_2, 16_3\} \\
 A_{33} &= \{29_1, 3_3, 14_2\} & A_{34} &= \{52_3, 32_3, 0_3\} & A_{35} &= \{24_2, 33_1, 10_3\} \\
 A_{36} &= \{42_2, 32_2, 51_2\} & A_{37} &= \{44_1, 31_1, 20_1\} & A_{38} &= \{38_3, 39_2, 42_1\} \\
 A_{39} &= \{7_2, 35_1, 1_2\} & A_{40} &= \{37_3, 12_2, 31_3\} & A_{41} &= \{46_2, 8_2, 26_3\} \\
 A_{42} &= \{5_3, 27_3, 50_3\} & A_{43} &= \{43_2, 40_2, 24_3\} & A_{44} &= \{0_1, 50_1, 34_2\} \\
 A_{45} &= \{4_1, 19_1, 37_2\} & A_{46} &= \{45_1, 40_3, 9_1\} & A_{47} &= \{19_2, 41_2, 11_2\} \\
 A_{48} &= \{20_3, 21_1, 28_1\} & A_{49} &= \{25_3, 31_2, 13_2\} & A_{50} &= \{11_3, 6_2, 28_3\} \\
 A_{51} &= \{18_3, 15_3, 52_1\} & A_{52} &= \{45_3, 35_3, 1_3\} & B_1 &= \{39_3, 43_2, 45_1\} \\
 B_2 &= \{25_1, 10_3, 36_2\} & B_3 &= \{48_2, 33_1, 6_3\} & B_4 &= \{48_1, 49_3, 52_2\} \\
 B_5 &= \{26_2, 27_1, 30_3\} & B_6 &= \{20_1, 41_3, 27_2\} & B_7 &= \{43_3, 11_2, 50_1\} \\
 B_8 &= \{20_2, 41_1, 27_3\} & B_9 &= \{46_1, 33_3, 38_2\} & B_{10} &= \{42_3, 29_2, 34_1\} \\
 B_{11} &= \{41_2, 28_1, 33_3\} & B_{12} &= \{24_1, 47_3, 7_2\} & B_{13} &= \{47_2, 17_1, 30_3\} \\
 B_{14} &= \{13_3, 3_2, 15_1\} & B_{15} &= \{8_2, 51_1, 10_3\} & B_{16} &= \{17_1, 26_3, 3_2\} \\
 B_{17} &= \{45_3, 19_2, 30_1\} & B_{18} &= \{39_2, 13_1, 24_3\} & B_{19} &= \{41_1, 6_3, 16_2\} \\
 B_{20} &= \{4_3, 22_2, 32_1\} & B_{21} &= \{40_2, 5_1, 15_3\} & B_{22} &= \{39_1, 48_2, 15_3\} \\
 B_{23} &= \{22_3, 31_1, 51_2\} & B_{24} &= \{13_3, 44_1, 37_2\} & B_{25} &= \{50_1, 28_2, 21_3\} \\
 B_{26} &= \{18_1, 18_2, 18_3\}
 \end{aligned}$$

An $(\mathbb{Z}_{55} \times [3])$ -GBTD-starter:

$$\begin{aligned}
A_0 &= \{0_1, 37_2, 19_3\} & A_1 &= \{34_3, 9_3, 48_3\} & A_2 &= \{1_1, 3_1, 6_1\} \\
A_3 &= \{0_2, 22_2, 23_2\} & A_4 &= \{26_3, 47_3, 50_3\} & A_5 &= \{41_2, 14_2, 54_2\} \\
A_6 &= \{11_1, 37_1, 54_1\} & A_7 &= \{43_1, 13_2, 38_3\} & A_8 &= \{14_1, 10_2, 6_3\} \\
A_9 &= \{52_1, 31_2, 10_3\} & A_{10} &= \{47_2, 12_2, 38_2\} & A_{11} &= \{18_1, 18_2, 18_3\} \\
A_{12} &= \{42_1, 11_2, 35_3\} & A_{13} &= \{2_1, 16_1, 36_1\} & A_{14} &= \{4_1, 8_1, 26_1\} \\
A_{15} &= \{30_1, 42_2, 54_3\} & A_{16} &= \{39_2, 43_2, 49_2\} & A_{17} &= \{29_1, 40_2, 51_3\} \\
A_{18} &= \{31_1, 44_2, 2_3\} & A_{19} &= \{19_1, 20_2, 21_3\} & A_{20} &= \{5_1, 15_1, 28_1\} \\
A_{21} &= \{39_1, 46_1, 47_1\} & A_{22} &= \{44_1, 15_2, 41_3\} & A_{23} &= \{17_1, 16_2, 15_3\} \\
A_{24} &= \{45_2, 53_2, 34_2\} & A_{25} &= \{24_1, 30_2, 36_3\} & A_{26} &= \{31_3, 43_3, 42_3\} \\
A_{27} &= \{40_3, 3_3, 5_3\} & A_{28} &= \{45_1, 17_2, 44_3\} & A_{29} &= \{51_2, 8_2, 46_2\} \\
A_{30} &= \{41_1, 9_2, 32_3\} & A_{31} &= \{50_1, 27_2, 4_3\} & A_{32} &= \{25_3, 12_3, 17_3\} \\
A_{33} &= \{39_3, 29_3, 1_3\} & A_{34} &= \{52_3, 20_3, 16_3\} & A_{35} &= \{33_1, 48_2, 8_3\} \\
A_{36} &= \{22_1, 26_2, 30_3\} & A_{37} &= \{7_1, 13_1, 32_1\} & A_{38} &= \{9_1, 20_1, 48_1\} \\
A_{39} &= \{21_1, 24_2, 27_3\} & A_{40} &= \{27_1, 36_2, 45_3\} & A_{41} &= \{5_2, 19_2, 21_2\} \\
A_{42} &= \{53_1, 33_2, 13_3\} & A_{43} &= \{23_1, 28_2, 33_3\} & A_{44} &= \{32_2, 7_2, 25_2\} \\
A_{45} &= \{10_1, 2_2, 49_3\} & A_{46} &= \{12_1, 6_2, 0_3\} & A_{47} &= \{22_3, 28_3, 37_3\} \\
A_{48} &= \{4_2, 1_2, 35_2\} & A_{49} &= \{51_1, 29_2, 7_3\} & A_{50} &= \{46_3, 24_3, 53_3\} \\
A_{51} &= \{34_1, 50_2, 11_3\} & A_{52} &= \{25_1, 40_1, 49_1\} & A_{53} &= \{38_1, 3_2, 23_3\} \\
A_{54} &= \{35_1, 52_2, 14_3\} & A_{55} &= \{32_1, 16_2, 0_3\} & B_1 &= \{3_1, 1_2, 54_3\} \\
B_2 &= \{23_1, 41_2, 4_3\} & B_3 &= \{34_1, 0_2, 21_3\} & B_4 &= \{35_1, 8_2, 36_3\} \\
B_5 &= \{24_1, 53_2, 27_3\} & B_6 &= \{39_1, 32_2, 25_3\} & B_7 &= \{28_1, 47_2, 11_3\} \\
B_8 &= \{9_1, 45_2, 26_3\} & B_9 &= \{18_1, 25_2, 32_3\} & B_{11} &= \{8_1, 30_2, 52_3\} \\
B_{11} &= \{27_1, 3_2, 34_3\} & B_{12} &= \{29_1, 12_2, 50_3\} & B_{13} &= \{19_1, 4_2, 44_3\} \\
B_{14} &= \{7_1, 50_2, 38_3\} & B_{15} &= \{38_1, 24_2, 10_3\} & B_{16} &= \{41_1, 31_2, 21_3\} \\
B_{17} &= \{51_1, 4_2, 12_3\} & B_{18} &= \{33_1, 20_2, 7_3\} & B_{19} &= \{46_1, 43_2, 40_3\} \\
B_{20} &= \{4_1, 14_2, 24_3\} & B_{21} &= \{17_1, 6_2, 50_3\} & B_{22} &= \{16_1, 11_2, 6_3\} \\
B_{23} &= \{14_1, 28_2, 42_3\} & B_{24} &= \{47_1, 38_2, 29_3\} & B_{25} &= \{16_1, 18_2, 20_3\} \\
B_{26} &= \{9_1, 39_2, 14_3\}
\end{aligned}$$

A 3-*colorable $(\mathbb{Z}_{11} \times [3])$ -GBTD-starter with property II:

• \mathcal{S} is given by the following blocks,

$$\begin{aligned}
A_0 &= \{6_1, 9_1, 0_2\} & A_1 &= \{8_1, 2_1, 4_1\} & A_2 &= \{10_1, 5_3, 8_3\} \\
A_3 &= \{8_2, 6_3, 5_1\} & A_4 &= \{2_3, 7_2, 3_1\} & A_5 &= \{9_3, 2_2, 10_3\} \\
A_6 &= \{3_2, 7_1, 4_2\} & A_7 &= \{0_1, 4_3, 1_1\} & A_8 &= \{1_3, 3_3, 7_3\} \\
A_9 &= \{5_2, 10_2, 1_2\} & A_{10} &= \{0_3, 6_2, 9_2\} & B_1 &= \{6_2, 0_1, 7_3\} \\
B_2 &= \{4_1, 9_3, 5_2\} & B_3 &= \{7_3, 5_1, 4_2\} & B_4 &= \{3_1, 1_2, 0_3\} \\
B_5 &= \{2_3, 2_1, 2_2\}
\end{aligned}$$

• Color the blocks as follow,

- (i) $A_0, A_1 - 1, A_3 - 3, A_4 - 4, A_5 - 5, A_7 - 7, A_8 - 8,$
 B_1 and B_4 are assigned with \clubsuit ;
- (ii) B_2, B_3 and B_5 are assigned with \diamond .
- 5_3 is a witness for \clubsuit and 0_1 is a witness for \diamond and \heartsuit .

A 3-*colorable $(\mathbb{Z}_{23} \times [3])$ -GBTD-starter with property II:

• \mathcal{S} is given by the following blocks,

$$\begin{aligned}
A_0 &= \{12_1, 6_1, 8_3\} & A_1 &= \{15_2, 0_1, 20_3\} & A_2 &= \{17_2, 5_1, 12_3\} \\
A_3 &= \{1_2, 21_2, 13_1\} & A_4 &= \{20_1, 17_1, 9_3\} & A_5 &= \{1_3, 21_3, 13_2\} \\
A_6 &= \{10_2, 18_2, 4_3\} & A_7 &= \{18_1, 3_1, 12_2\} & A_8 &= \{2_3, 10_3, 19_1\} \\
A_9 &= \{19_3, 6_2, 7_3\} & A_{10} &= \{0_2, 10_1, 11_2\} & A_{11} &= \{4_1, 14_3, 15_1\} \\
A_{12} &= \{7_1, 11_1, 5_3\} & A_{13} &= \{22_3, 3_3, 20_2\} & A_{14} &= \{22_1, 9_1, 8_1\} \\
A_{15} &= \{4_2, 8_2, 2_1\} & A_{16} &= \{6_3, 16_3, 15_3\} & A_{17} &= \{16_2, 3_2, 2_2\} \\
A_{18} &= \{14_1, 21_1, 16_1\} & A_{19} &= \{11_3, 18_3, 13_3\} & A_{20} &= \{0_3, 17_3, 19_2\} \\
A_{21} &= \{7_2, 14_2, 9_2\} & A_{22} &= \{5_2, 22_2, 1_1\} & B_1 &= \{1_1, 12_3, 19_2\} \\
B_2 &= \{14_3, 2_2, 9_1\} & B_3 &= \{14_1, 7_3, 10_2\} & B_4 &= \{1_3, 17_2, 20_1\} \\
B_5 &= \{15_2, 8_1, 11_3\} & B_6 &= \{1_1, 9_3, 6_2\} & B_7 &= \{18_3, 3_2, 0_1\} \\
B_8 &= \{5_1, 6_3, 19_2\} & B_9 &= \{1_3, 2_2, 15_1\} & B_{10} &= \{13_2, 14_1, 4_3\} \\
B_{11} &= \{7_1, 7_2, 7_3\}
\end{aligned}$$

• Color the blocks as follow,

- (i) $A_0, A_1 - 1, A_2 - 2, A_3 - 3, A_4 - 4, A_5 - 5, A_9 - 9,$
 $A_{10} - 10, A_{13} - 13, A_{14} - 14, A_{18} - 18, A_{19} - 19,$
 $A_{20} - 20, B_1, B_2, B_3$ and B_4 are assigned with \clubsuit ;
- (ii) $B_6, B_7, B_8, B_9, B_{10}$ and B_{11} are assigned with \diamond ;
- (iii) $A_{16} - 16, A_{17} - 17, A_{22} - 22$ and B_5 are assigned with \heartsuit ;
- $11_3, 8_3, 0_1$ are witnesses for \clubsuit, \diamond and \heartsuit respectively.