Appendix 6 solution for j12020\_1.sm

After 48 iterations, the fitness valued (100) is found with a deviation of 12.35%, which is smaller than 30%.

C:\Anaconda\envs\tensorflow\python.exe "C:/Users/yongping/python work/combine date read 120 and opt.py"

v5 0 14.037015914916992 s [111, 154] 24.719101123595504 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 13, 8, 12, 19, 12, 12, 14, 26, 24, 6, 19, 17, 12, 25, 22, 35, 7, 17, 31, 33, 12, 12, 37, 36, 19, 34, 3, 12, 42, 16, 19, 19, 54, 37, 35, 33, 22, 43, 16, 43, 43, 35, 43, 49, 14, 13, 45, 30, 57, 50, 60, 44, 36, 24, 16, 47, 52, 57, 64, 25, 51, 57, 24, 54, 36, 30, 31, 59, 16, 66, 19, 63, 69, 59, 45, 57, 60, 74, 31, 38, 68, 65, 26, 73, 70, 32, 58, 51, 60, 61, 27, 32, 75, 73, 69, 78, 83, 63, 67, 73, 58, 69, 79, 40, 90, 88, 95, 83, 105, 70, 50, 111] 0

111 111

v5 1 53.446725845336914 s [110, 149] 23.595505617977526 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 12, 13, 12, 12, 14, 19, 6, 12, 14, 17, 12, 13, 22, 21, 7, 17, 19, 19, 22, 12, 23, 21, 19, 26, 24, 27, 28, 18, 35, 19, 37, 26, 28, 21, 34, 36, 31, 35, 35, 21, 36, 32, 14, 13, 42, 42, 40, 48, 43, 40, 13, 43, 52, 48, 30, 44, 53, 44, 51, 50, 40, 52, 48, 42, 54, 58, 16, 65, 36, 48, 68, 61, 45, 36, 58, 57, 51, 48, 70, 62, 56, 61, 68, 62, 58, 51, 71, 60, 27, 49, 69, 72, 61, 76, 82, 63, 78, 84, 58, 69, 71, 72, 89, 86, 94, 94, 104, 64, 78, 110] 0

109 112

v5 2 90.68136405944824 s [108, 109] 21.34831460674157 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 12, 13, 12, 22, 16, 19, 6, 6, 14, 49, 12, 13, 45, 21, 44, 47, 19, 19, 12, 12, 23, 36, 19, 22, 46, 15, 30, 12, 21, 19, 39, 23, 28, 27, 22, 38, 56, 31, 32, 22, 36, 28, 15, 53, 55, 33, 50, 28, 56, 36, 13, 26, 13, 45, 45, 50, 57, 49, 42, 47, 38, 39, 44, 40, 37, 56, 57, 63, 59, 22, 66, 58, 43, 33, 50, 30, 58, 39, 67, 64, 49, 64, 66, 58, 49, 53, 59, 64, 28, 65, 73, 70, 68, 74, 80, 59, 66, 72, 73, 65, 78, 74, 87, 84, 92, 82, 102, 72, 80, 108] 0

113 112

v5 3 128.315984249115 s [108, 215] 21.34831460674157 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 12, 13, 12, 22, 16, 19, 6, 6, 14, 49, 12, 13, 45, 21, 44, 47, 19, 19, 12, 12, 23, 36, 19, 22, 46, 15, 30, 12, 21, 19, 39, 23, 28, 27, 22, 38, 56, 31, 32, 22, 36, 28, 15, 53, 55, 33, 50, 28, 56, 36, 13, 26, 13, 45, 45, 50, 57, 49, 42, 47, 38, 39, 44, 40, 37, 56, 57, 63, 59, 22, 66, 58, 43, 33, 50, 30, 58, 39, 67, 64, 49, 64, 66, 58, 49, 53, 59, 64, 28, 65, 73, 70, 68, 74, 80, 59, 66, 72, 73, 65, 78, 74, 87, 84, 92, 82, 102, 72, 80, 108] 0

107 114

v5 4 169.0185489654541 s [107, 117] 20.224719101123593 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 53, 32, 32, 21, 51, 28, 17, 12, 53, 33, 48, 30, 51, 36, 32, 37, 13, 48, 43, 48, 55, 46, 39, 45, 33, 44, 41, 39, 44, 55, 56, 62, 57, 22, 65, 58, 40, 30, 50, 31, 57, 39, 67, 62, 46, 62, 65, 58, 48, 52, 58, 62, 29, 63, 71, 69, 64, 73, 79, 57, 65, 71, 66, 63, 74, 74, 86, 83, 91, 81, 101, 71, 80, 107] 0

115 111

v5 5 212.55433320999146 s [107, 148] 20.224719101123593 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 53, 32, 32, 21, 51, 28, 17, 12, 53, 33, 48, 30, 51, 36, 32, 37, 13, 48, 43, 48, 55, 46, 39, 45, 33, 44, 41, 39, 44, 55, 56, 62, 57, 22, 65, 58, 40, 30, 50, 31, 57, 39, 67, 62, 46, 62, 65, 58, 48, 52, 58, 62, 29, 63, 71, 69, 64, 73, 79, 57, 65, 71, 66, 63, 74, 74, 86, 83, 91, 81, 101, 71, 80, 107] 0

109 113

v5 6 258.44636392593384 s [107, 157] 20.224719101123593 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 53, 32, 32, 21, 51, 28, 17, 12, 53, 33, 48, 30, 51, 36, 32, 37, 13, 48, 43, 48, 55, 46, 39, 45, 33, 44, 41, 39, 44, 55, 56, 62, 57, 22, 65, 58, 40, 30, 50, 31, 57, 39, 67, 62, 46, 62, 65, 58, 48, 52, 58, 62, 29, 63, 71, 69, 64, 73, 79, 57, 65, 71, 66, 63, 74, 74, 86, 83, 91, 81, 101, 71, 80, 107] 0

109 107

v5 7 306.55840492248535 s [103, 128] 15.730337078651685 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 51, 32, 32, 21, 50, 28, 17, 12, 53, 33, 48, 30, 53, 36, 32, 37, 13, 48, 43, 48, 58, 46, 39, 45, 33, 44, 41, 39, 44, 51, 52, 58, 54, 22, 61, 58, 40, 30, 55, 31, 58, 39, 67, 59, 46, 65, 62, 59, 48, 55, 61, 62, 29, 58, 71, 65, 61, 71, 75, 54, 68, 74, 65, 61, 71, 73, 82, 81, 87, 84, 97, 70, 79, 103] 0

107 107

v5 8 350.49813508987427 s [103, 248] 15.730337078651685 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 51, 32, 32, 21, 50, 28, 17, 12, 53, 33, 48, 30, 53, 36, 32, 37, 13, 48, 43, 48, 58, 46, 39, 45, 33, 44, 41, 39, 44, 51, 52, 58, 54, 22, 61, 58, 40, 30, 55, 31, 58, 39, 67, 59, 46, 65, 62, 59, 48, 55, 61, 62, 29, 58, 71, 65, 61, 71, 75, 54, 68, 74, 65, 61, 71, 73, 82, 81, 87, 84, 97, 70, 79, 103] 0

104 103

v5 9 398.0861163139343 s [103, 114] 15.730337078651685 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 51, 32, 32, 21, 50, 28, 17, 12, 53, 33, 48, 30, 53, 36, 32, 37, 13, 48, 43, 48, 58, 46, 39, 45, 33, 44, 41, 39, 44, 51, 52, 58, 54, 22, 61, 58, 40, 30, 55, 31, 58, 39, 67, 59, 46, 65, 62, 59, 48, 55, 61, 62, 29, 58, 71, 65, 61, 71, 75, 54, 68, 74, 65, 61, 71, 73, 82, 81, 87, 84, 97, 70, 79, 103] 0

106 110

v5 10 439.49173188209534 s [103, 130] 15.730337078651685 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 51, 32, 32, 21, 50, 28, 17, 12, 53, 33, 48, 30, 53, 36, 32, 37, 13, 48, 43, 48, 58, 46, 39, 45, 33, 44, 41, 39, 44, 51, 52, 58, 54, 22, 61, 58, 40, 30, 55, 31, 58, 39, 67, 59, 46, 65, 62, 59, 48, 55, 61, 62, 29, 58, 71, 65, 61, 71, 75, 54, 68, 74, 65, 61, 71, 73, 82, 81, 87, 84, 97, 70, 79, 103] 0

114 103

v5 11 487.0006823539734 s [103, 114] 15.730337078651685 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 21, 13, 12, 12, 14, 19, 25, 6, 14, 46, 12, 13, 41, 21, 7, 44, 19, 19, 12, 26, 23, 12, 22, 22, 41, 15, 28, 15, 28, 21, 37, 23, 36, 25, 22, 44, 51, 32, 32, 21, 50, 28, 17, 12, 53, 33, 48, 30, 53, 36, 32, 37, 13, 48, 43, 48, 58, 46, 39, 45, 33, 44, 41, 39, 44, 51, 52, 58, 54, 22, 61, 58, 40, 30, 55, 31, 58, 39, 67, 59, 46, 65, 62, 59, 48, 55, 61, 62, 29, 58, 71, 65, 61, 71, 75, 54, 68, 74, 65, 61, 71, 73, 82, 81, 87, 84, 97, 70, 79, 103] 0

104 103

v5 12 539.0476512908936 s [103, 134] 15.730337078651685 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 19, 41, 6, 14, 42, 12, 13, 33, 21, 7, 28, 19, 19, 12, 27, 23, 12, 21, 21, 47, 15, 28, 15, 22, 48, 51, 23, 36, 22, 22, 44, 24, 30, 30, 21, 56, 32, 17, 12, 55, 30, 44, 42, 57, 31, 48, 40, 13, 52, 37, 64, 71, 43, 24, 40, 55, 47, 36, 31, 47, 51, 27, 58, 55, 37, 61, 62, 37, 23, 48, 58, 51, 40, 71, 60, 42, 78, 61, 57, 31, 37, 64, 43, 56, 52, 63, 65, 62, 69, 75, 36, 71, 77, 64, 47, 72, 69, 82, 79, 87, 87, 97, 72, 75, 103] 0

104 114

v5 13 598.8103530406952 s [102, 118] 14.606741573033707 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 19, 39, 6, 14, 27, 12, 13, 32, 21, 7, 28, 19, 19, 12, 27, 23, 12, 21, 21, 44, 15, 28, 15, 22, 46, 48, 23, 36, 22, 22, 44, 24, 30, 30, 21, 54, 31, 17, 12, 51, 30, 43, 40, 54, 31, 46, 37, 13, 50, 36, 60, 67, 41, 24, 37, 53, 44, 36, 31, 45, 49, 27, 56, 53, 37, 59, 60, 37, 23, 46, 54, 49, 36, 69, 58, 40, 74, 59, 60, 55, 54, 62, 42, 54, 68, 60, 63, 61, 67, 73, 66, 71, 77, 60, 72, 71, 73, 80, 77, 85, 87, 96, 71, 79, 102] 0

106 106

v5 14 659.0421857833862 s [102, 102] 14.606741573033707 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 19, 39, 6, 14, 27, 12, 13, 32, 21, 7, 28, 19, 19, 12, 27, 23, 12, 21, 21, 44, 15, 28, 15, 22, 46, 48, 23, 36, 22, 22, 44, 24, 30, 30, 21, 54, 31, 17, 12, 51, 30, 43, 40, 54, 31, 46, 37, 13, 50, 36, 60, 67, 41, 24, 37, 53, 44, 36, 31, 45, 49, 27, 56, 53, 37, 59, 60, 37, 23, 46, 54, 49, 36, 69, 58, 40, 74, 59, 60, 55, 54, 62, 42, 54, 68, 60, 63, 61, 67, 73, 66, 71, 77, 60, 72, 71, 73, 80, 77, 85, 87, 96, 71, 79, 102] 0

110 104

v5 15 718.3867881298065 s [102, 117] 14.606741573033707 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 19, 39, 6, 14, 27, 12, 13, 32, 21, 7, 28, 19, 19, 12, 27, 23, 12, 21, 21, 44, 15, 28, 15, 22, 46, 48, 23, 36, 22, 22, 44, 24, 30, 30, 21, 54, 31, 17, 12, 51, 30, 43, 40, 54, 31, 46, 37, 13, 50, 36, 60, 67, 41, 24, 37, 53, 44, 36, 31, 45, 49, 27, 56, 53, 37, 59, 60, 37, 23, 46, 54, 49, 36, 69, 58, 40, 74, 59, 60, 55, 54, 62, 42, 54, 68, 60, 63, 61, 67, 73, 66, 71, 77, 60, 72, 71, 73, 80, 77, 85, 87, 96, 71, 79, 102] 0

102 112

v5 16 776.224622964859 s [101, 149] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 22, 41, 6, 14, 17, 24, 13, 36, 21, 7, 22, 19, 19, 12, 18, 23, 27, 31, 13, 45, 12, 29, 12, 22, 48, 49, 23, 36, 21, 22, 45, 16, 22, 26, 21, 55, 28, 14, 15, 53, 30, 45, 40, 55, 31, 48, 38, 13, 52, 36, 56, 67, 43, 34, 40, 27, 45, 36, 32, 47, 49, 18, 56, 22, 39, 59, 62, 41, 27, 48, 55, 49, 38, 71, 56, 42, 74, 59, 58, 56, 34, 63, 44, 56, 69, 62, 63, 62, 68, 73, 63, 70, 76, 62, 69, 72, 74, 80, 78, 85, 86, 95, 72, 80, 101] 0

103 104

v5 17 832.4571268558502 s [101, 149] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 22, 41, 6, 14, 17, 24, 13, 36, 21, 7, 22, 19, 19, 12, 18, 23, 27, 31, 13, 45, 12, 29, 12, 22, 48, 49, 23, 36, 21, 22, 45, 16, 22, 26, 21, 55, 28, 14, 15, 53, 30, 45, 40, 55, 31, 48, 38, 13, 52, 36, 56, 67, 43, 34, 40, 27, 45, 36, 32, 47, 49, 18, 56, 22, 39, 59, 62, 41, 27, 48, 55, 49, 38, 71, 56, 42, 74, 59, 58, 56, 34, 63, 44, 56, 69, 62, 63, 62, 68, 73, 63, 70, 76, 62, 69, 72, 74, 80, 78, 85, 86, 95, 72, 80, 101] 0

105 105

v5 18 888.8689208030701 s [101, 128] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 22, 41, 6, 14, 17, 24, 13, 36, 21, 7, 22, 19, 19, 12, 18, 23, 27, 31, 13, 45, 12, 29, 12, 22, 48, 49, 23, 36, 21, 22, 45, 16, 22, 26, 21, 55, 28, 14, 15, 53, 30, 45, 40, 55, 31, 48, 38, 13, 52, 36, 56, 67, 43, 34, 40, 27, 45, 36, 32, 47, 49, 18, 56, 22, 39, 59, 62, 41, 27, 48, 55, 49, 38, 71, 56, 42, 74, 59, 58, 56, 34, 63, 44, 56, 69, 62, 63, 62, 68, 73, 63, 70, 76, 62, 69, 72, 74, 80, 78, 85, 86, 95, 72, 80, 101] 0

109 111

v5 19 946.1533308029175 s [101, 132] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 22, 41, 6, 14, 17, 24, 13, 36, 21, 7, 22, 19, 19, 12, 18, 23, 27, 31, 13, 45, 12, 29, 12, 22, 48, 49, 23, 36, 21, 22, 45, 16, 22, 26, 21, 55, 28, 14, 15, 53, 30, 45, 40, 55, 31, 48, 38, 13, 52, 36, 56, 67, 43, 34, 40, 27, 45, 36, 32, 47, 49, 18, 56, 22, 39, 59, 62, 41, 27, 48, 55, 49, 38, 71, 56, 42, 74, 59, 58, 56, 34, 63, 44, 56, 69, 62, 63, 62, 68, 73, 63, 70, 76, 62, 69, 72, 74, 80, 78, 85, 86, 95, 72, 80, 101] 0

102 107

v5 20 1002.1179437637329 s [101, 106] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 22, 41, 6, 14, 17, 24, 13, 36, 21, 7, 22, 19, 19, 12, 18, 23, 27, 31, 13, 45, 12, 29, 12, 22, 48, 49, 23, 36, 21, 22, 45, 16, 22, 26, 21, 55, 28, 14, 15, 53, 30, 45, 40, 55, 31, 48, 38, 13, 52, 36, 56, 67, 43, 34, 40, 27, 45, 36, 32, 47, 49, 18, 56, 22, 39, 59, 62, 41, 27, 48, 55, 49, 38, 71, 56, 42, 74, 59, 58, 56, 34, 63, 44, 56, 69, 62, 63, 62, 68, 73, 63, 70, 76, 62, 69, 72, 74, 80, 78, 85, 86, 95, 72, 80, 101] 0

109 111

v5 21 1058.4963269233704 s [101, 218] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 36, 13, 12, 12, 14, 22, 41, 6, 14, 17, 24, 13, 36, 21, 7, 22, 19, 19, 12, 18, 23, 27, 31, 13, 45, 12, 29, 12, 22, 48, 49, 23, 36, 21, 22, 45, 16, 22, 26, 21, 55, 28, 14, 15, 53, 30, 45, 40, 55, 31, 48, 38, 13, 52, 36, 56, 67, 43, 34, 40, 27, 45, 36, 32, 47, 49, 18, 56, 22, 39, 59, 62, 41, 27, 48, 55, 49, 38, 71, 56, 42, 74, 59, 58, 56, 34, 63, 44, 56, 69, 62, 63, 62, 68, 73, 63, 70, 76, 62, 69, 72, 74, 80, 78, 85, 86, 95, 72, 80, 101] 0

101 108

v5 22 1109.2065269947052 s [101, 128] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 22, 6, 6, 14, 17, 12, 13, 34, 21, 20, 17, 19, 19, 22, 29, 26, 12, 19, 23, 45, 12, 31, 12, 15, 46, 48, 23, 37, 21, 32, 45, 16, 32, 32, 22, 49, 29, 14, 25, 54, 40, 43, 40, 55, 33, 46, 37, 22, 54, 21, 55, 68, 44, 31, 40, 25, 45, 46, 40, 46, 49, 28, 56, 22, 38, 59, 64, 42, 27, 52, 50, 44, 46, 73, 55, 43, 75, 61, 59, 57, 39, 63, 52, 57, 70, 62, 63, 62, 69, 73, 64, 70, 76, 63, 70, 72, 74, 80, 79, 85, 86, 95, 73, 80, 101] 0

102 108

v5 23 1153.6608228683472 s [101, 126] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 22, 6, 6, 14, 17, 12, 13, 34, 21, 20, 17, 19, 19, 22, 29, 26, 12, 19, 23, 45, 12, 31, 12, 15, 46, 48, 23, 37, 21, 32, 45, 16, 32, 32, 22, 49, 29, 14, 25, 54, 40, 43, 40, 55, 33, 46, 37, 22, 54, 21, 55, 68, 44, 31, 40, 25, 45, 46, 40, 46, 49, 28, 56, 22, 38, 59, 64, 42, 27, 52, 50, 44, 46, 73, 55, 43, 75, 61, 59, 57, 39, 63, 52, 57, 70, 62, 63, 62, 69, 73, 64, 70, 76, 63, 70, 72, 74, 80, 79, 85, 86, 95, 73, 80, 101] 0

107 112

v5 24 1194.7114191055298 s [101, 138] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 22, 6, 6, 14, 17, 12, 13, 34, 21, 20, 17, 19, 19, 22, 29, 26, 12, 19, 23, 45, 12, 31, 12, 15, 46, 48, 23, 37, 21, 32, 45, 16, 32, 32, 22, 49, 29, 14, 25, 54, 40, 43, 40, 55, 33, 46, 37, 22, 54, 21, 55, 68, 44, 31, 40, 25, 45, 46, 40, 46, 49, 28, 56, 22, 38, 59, 64, 42, 27, 52, 50, 44, 46, 73, 55, 43, 75, 61, 59, 57, 39, 63, 52, 57, 70, 62, 63, 62, 69, 73, 64, 70, 76, 63, 70, 72, 74, 80, 79, 85, 86, 95, 73, 80, 101] 0

109 101

v5 25 1241.4074618816376 s [101, 110] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 22, 6, 6, 14, 17, 12, 13, 34, 21, 20, 17, 19, 19, 22, 29, 26, 12, 19, 23, 45, 12, 31, 12, 15, 46, 48, 23, 37, 21, 32, 45, 16, 32, 32, 22, 49, 29, 14, 25, 54, 40, 43, 40, 55, 33, 46, 37, 22, 54, 21, 55, 68, 44, 31, 40, 25, 45, 46, 40, 46, 49, 28, 56, 22, 38, 59, 64, 42, 27, 52, 50, 44, 46, 73, 55, 43, 75, 61, 59, 57, 39, 63, 52, 57, 70, 62, 63, 62, 69, 73, 64, 70, 76, 63, 70, 72, 74, 80, 79, 85, 86, 95, 73, 80, 101] 0

109 111

v5 26 1288.9702651500702 s [101, 105] 13.48314606741573 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 33, 13, 12, 12, 14, 22, 6, 6, 14, 17, 12, 13, 34, 21, 20, 17, 19, 19, 22, 29, 26, 12, 19, 23, 45, 12, 31, 12, 15, 46, 48, 23, 37, 21, 32, 45, 16, 32, 32, 22, 49, 29, 14, 25, 54, 40, 43, 40, 55, 33, 46, 37, 22, 54, 21, 55, 68, 44, 31, 40, 25, 45, 46, 40, 46, 49, 28, 56, 22, 38, 59, 64, 42, 27, 52, 50, 44, 46, 73, 55, 43, 75, 61, 59, 57, 39, 63, 52, 57, 70, 62, 63, 62, 69, 73, 64, 70, 76, 63, 70, 72, 74, 80, 79, 85, 86, 95, 73, 80, 101] 0

100 107

v5 27 1339.4964289665222 s [100, 107] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

106 100

v5 28 1393.6951446533203 s [100, 154] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

100 113

v5 29 1443.2745735645294 s [100, 149] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

108 109

v5 30 1486.0082612037659 s [100, 170] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

103 100

v5 31 1537.6830279827118 s [100, 154] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

103 114

v5 32 1581.9559018611908 s [100, 126] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

101 113

v5 33 1631.7152743339539 s [100, 111] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

111 100

v5 34 1676.408198595047 s [100, 298] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

111 109

v5 35 1722.0481071472168 s [100, 166] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

103 116

v5 36 1770.923861503601 s [100, 140] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

114 100

v5 37 1813.3035714626312 s [100, 130] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

104 113

v5 38 1874.830444574356 s [100, 155] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

105 105

v5 39 1938.6491599082947 s [100, 133] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

108 100

v5 40 1985.2674989700317 s [100, 127] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

109 102

v5 41 2028.3890645503998 s [100, 146] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

112 112

v5 42 2078.438712835312 s [100, 125] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

103 110

v5 43 2123.3534564971924 s [100, 103] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

104 112

v5 44 2176.862593650818 s [100, 132] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

106 100

v5 45 2220.0335128307343 s [100, 185] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

115 105

v5 46 2275.8657519817352 s [100, 187] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

100 108

v5 47 2333.1466233730316 s [100, 107] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

101 110

v5 48 2387.432182788849 s [100, 121] 12.359550561797752 [0, 0, 0, 0, 8, 3, 3, 3, 8, 3, 7, 8, 35, 13, 12, 19, 14, 36, 24, 6, 14, 26, 12, 13, 29, 21, 7, 17, 19, 33, 12, 12, 27, 12, 19, 13, 44, 21, 32, 12, 18, 19, 47, 23, 45, 22, 22, 53, 25, 22, 23, 23, 53, 28, 15, 15, 53, 30, 42, 38, 54, 36, 43, 36, 45, 57, 21, 53, 66, 41, 31, 41, 37, 44, 36, 39, 45, 48, 26, 55, 28, 36, 58, 67, 41, 25, 47, 45, 43, 38, 76, 50, 36, 73, 58, 57, 54, 37, 62, 48, 27, 69, 60, 62, 61, 66, 72, 66, 69, 75, 62, 72, 71, 73, 79, 76, 84, 85, 94, 72, 79, 100] 0

Process finished with exit code -1