

TCG HW1 Report

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1 Question 1

1.1 Assumption

1. Game ends when any of the 16 tiles reach 2048.

1.2 State-space Complexity

First, each tiles can be empty, 2, 4, 8, 16, 32, 64, ..., 1024, in total 12 possibilities, and the game has 16 tiles. Therefore, the state-space complexity is $12^{16} \approx 1.85 \times 10^{17}$

1.3 Game-tree Complexity

2 Question 2

3 Question 3

4 Question 4