

# TCG HW1 Report

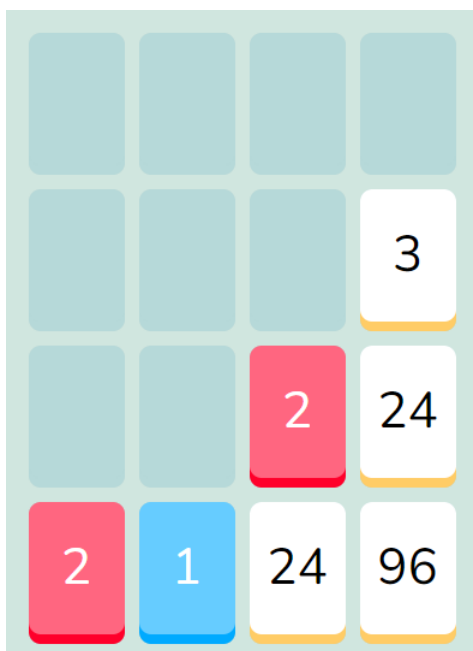
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## Heuristic for Threes! :

The method is based on [Composition of Basic Heuristics for the Game 2048](#), with some modifications to fit Threes!.

The heuristic first selects the steps that has the most empty tiles. If two moves have the same value, we then compare the one with higher monotonicity.

By saying monotonicity, with values that are all non-increasing or all non-decreasing along all rows and columns, with the highest value being in one of the corners.



However, in Threes!, which is different from 2048, 3s are merged by 1s and 2s.

We view 1s and 2s as the same value, so the above figure shows an example with the highest monotonicity that can be made with the given tiles.