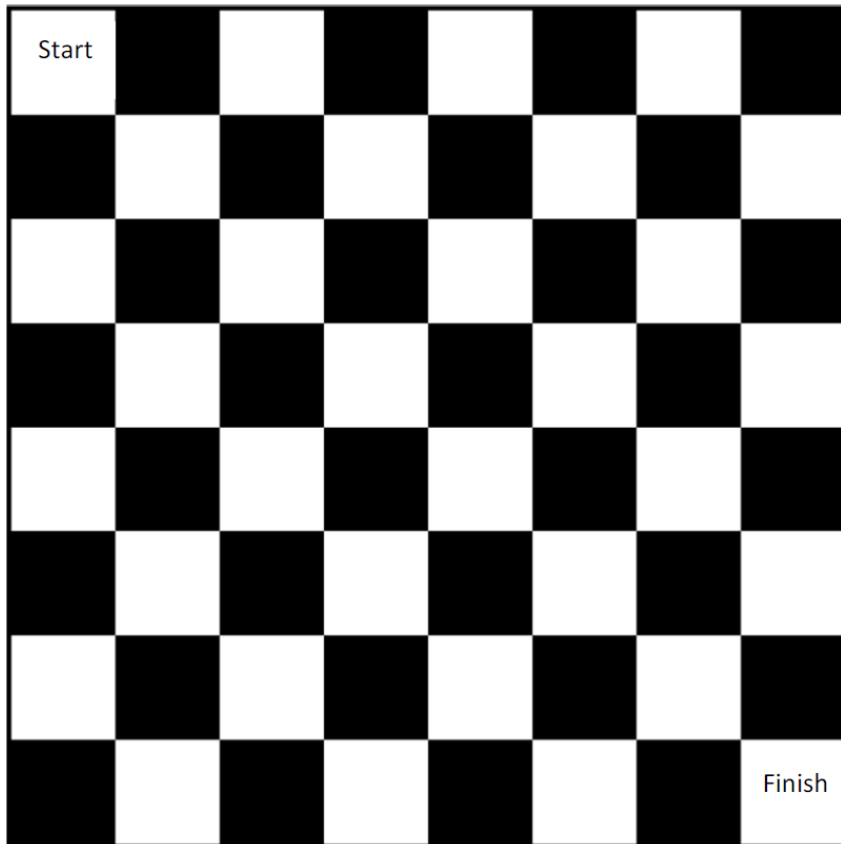


Games and Strategy

Name:

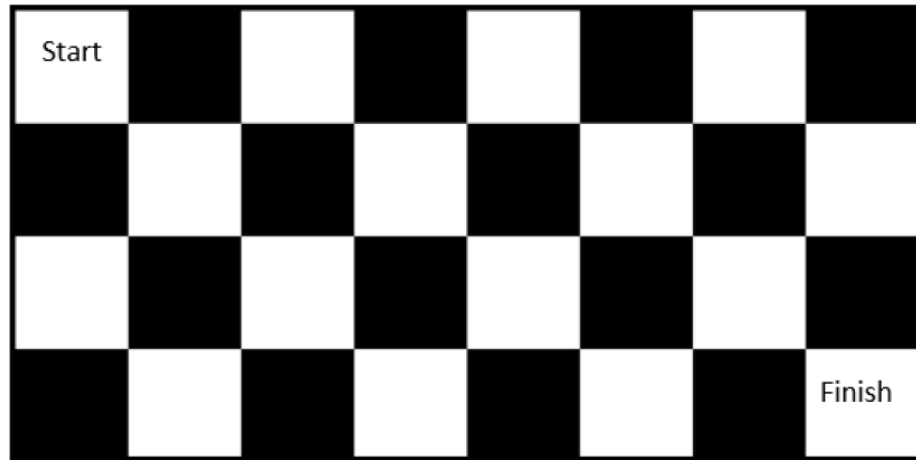
The Chess Board Challenge

Part 1: A rook starts in the top left corner of a chessboard. 2 players take turns moving it either horizontally or vertically (the way that a rook moves) towards the opposite corner (you can only move right or down). The winner is the player that moves it to the bottom left corner of the chessboard first.



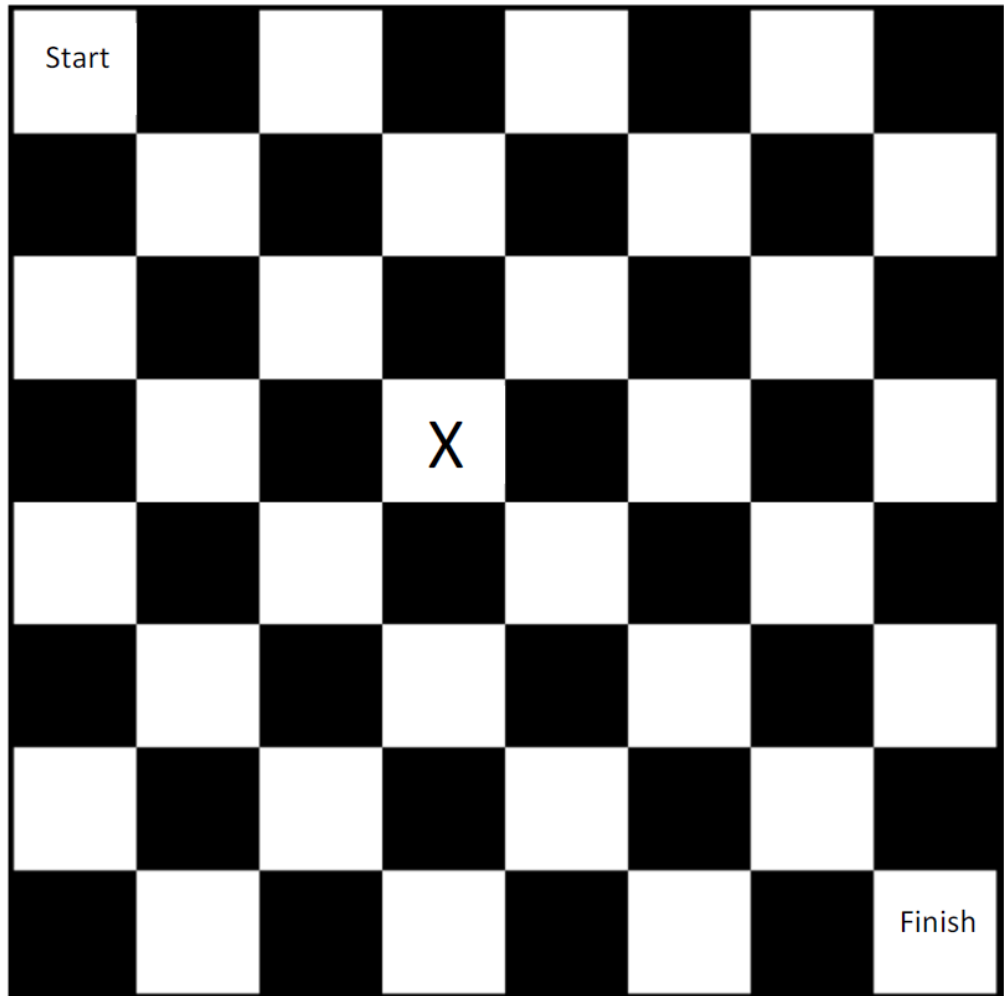
Play the game against an opponent (a classmate, sibling, parent, or other). Can you develop a winning strategy? Describe the strategies you tried and what strategy helped you win the game.

Part 2: The chessboard is folded in half horizontally so that it is now a 4 x 8 grid. The rules are still the same as before. Play against an opponent.



Can you develop a winning strategy? Describe the strategies you tried and what strategy helped you win the game.

Part 3: The chessboard now has a square crossed out as shown below, so that you are not allowed to land on it. The rules are still the same as before.



Play against an opponent. Can you develop a winning strategy? Describe the strategies you tried and what strategy helped you win the game.

The Haiku Challenge

A Haiku poem is a Japanese poem that has 3 lines: the first line has 5 syllables, the second has 7 syllables, and the last line has 5 syllables. For example:

*Solving math problems;
Getting lot along the way.
You're on the right track.*

The Haiku game is played with 3 rows of toothpicks. The first row has 5, the second has 7, and the third row has 5 toothpicks.

Note: If you would like to use manipulatives, you can use toothpicks, pencils, crayons, markers, etc. to help you play the game.

Part 1: Two players take turns removing 1, 2, or 3 toothpicks. The object is to force your opponent to take the last toothpick. Play against an opponent to try and figure out how to win. Use two different colors to show how toothpicks are selected. Describe your winning strategy.

Part 2: Two players take turns removing 1, 2, or 3 toothpicks. The object is to take the last toothpick. Play against an opponent to try and figure out how to win. Use two different colors to show how toothpicks are selected. Describe your winning strategy.

| | | | |

| | | | |

| | | | |

| | | | | | |

| | | | | | |

| | | | | | |

| | | | |

| | | | |

| | | | |

Part 3: Two players take turns removing 1, 2, 3, or 4 toothpicks. The object is to force your opponent to take the last toothpick. Play against an opponent to try and figure out how to win. Use two different colors to show how toothpicks are selected. Describe your winning strategy.

| | | | |

| | | | |

| | | | |

| | | | | | |

| | | | | | |

| | | | | | |

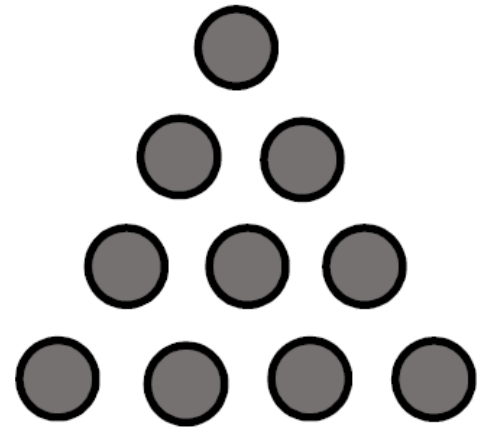
| | | | |

| | | | |

| | | | |

The Triangle Challenge

Part 1: Two players take turns removing 1, 2, 3, or 4 circles from the SAME ROW or from the SAME DIAGONAL. The object is to take the last circle. Play against an opponent to try and figure out how to win. Describe your winning strategy.



Part 2: Two players take turns removing 1, 2, 3, or 4 circles from the SAME ROW or from the SAME DIAGONAL. The object is to take the last circle. Play against an opponent to try and figure out how to win. Describe your winning strategy.

