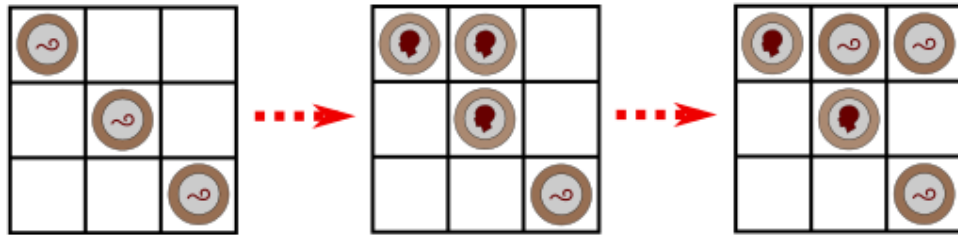


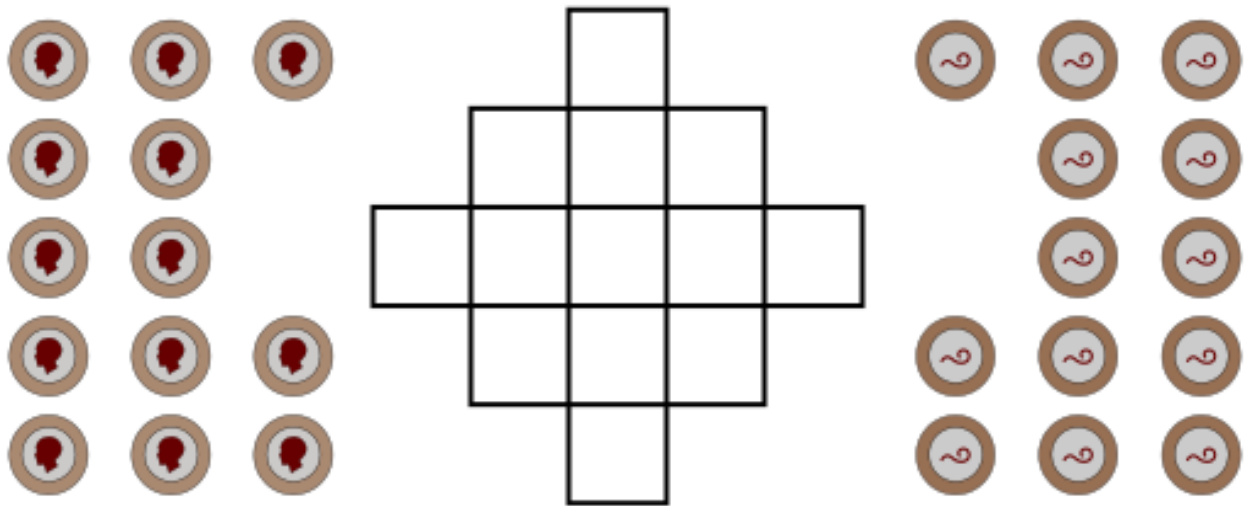
Puzzle of the Week

Coin Flipping – 2

A coin may be placed heads up or down in any empty spot. When a coin is placed, all coins touching its sides must be flipped over.



THE CHALLENGE: Fill this grid so all the coins end up heads up or heads down.



EXPLORATION: See what happens with other patterns of squares. Are there any that are impossible?

Puzzle of the Week

Coin Flipping – 2 – Notes

THE CHALLENGE: There are many simple strategies for doing this puzzle. Perhaps the easiest is to start by putting heads up coins in the four squares that have a single neighbor. Then, in the 3 by 3 empty box that remains, put heads down coins along a diagonal of the 3 by 3 box. Now you can finish solving this exactly as you did the “Coin Flipping - 1” puzzle.

A different strategy is to start at the top and fill them in order from top to bottom and left to right. Look at how many coins have yet to be filled in that will neighbor the current square - if that number is even, make that coin heads up, and if it is odd, make that coin heads down.

EXPLORATION: They should all be possible. It is just a matter of keeping track of evens and odds.