1. Sponge Bob is bored on day, and he decides to play a game. He starts by standing in the middle of a long hallway. In this game, Sponge Bob takes a turn by flipping a coin. If the coin shows Heads, he moves one foot to his right. If it shows Tails, he moves one foot to his left. After he takes 2015 turns, is it possible for Sponge Bob to be back at the same place he started?



Challenge:

Hermione Granger writes the numbers 1 through 2015 on a really long chalk board. She and Ron play a game. They take turns picking 2 numbers, a and b, and replacing them with a+b and a-b. They win the game if they manage to have exactly 501 odd numbers on the board. Is this a game they can beat?