Abstract: The matching game is a two-person game. One player is the match player and the other is the no-match player. Each player draws a ball at random from a bag containing balls of two different colors, say red and blue. The match player wins the game if the two balls drawn are of the same color otherwise the no-match player wins. A matching game of n colors, or simply an n-color matching game, is played the same way, except the balls are of n different colors.

We will talk about how to find the fair games.