Is This Fair?

Task Statement 1

1. Here are some games:
    - The Flipper flips 3 coins. If exactly 2 coins are the same, then the Flipper wins. Otherwise, the Challenger wins.
    - The Flipper flips 4 coins. If exactly 2 coins are the same, then the Flipper wins. Otherwise, the Challenger wins.

    Are these games fair?
2. Design rules for a fair game of flipping 5 coins.
3. Design rules for a fair game of flipping 6 coins.
4. Design a fair game, using any objects you want—for example, coins, spinners, or number cubes. Explain how you know your game is fair.

Is This Fair?

Task Statement 2

1. Here are some games:
    - The Flipper flips 3 coins. If there are more heads than tails, then the Flipper wins. Otherwise, the Challenger wins.
    - The Flipper flips 4 coins. If exactly 2 coins are the same, then the Flipper wins. Otherwise, the Challenger wins.

    a. One of the games is fair and the other is not. Which game is fair?

    b. For the game that isn't fair, change the rules to make it fair.
2. Design rules for a fair game of flipping 5 coins.
3. Design rules for a fair game that involves rolling 2 number cubes.