Who Will Win?

The goal of this activity is to develop intuitive ideas about probability.

Suppose that the spinner on the right is used in a simple game for three players. These are the rules of the game:

- Each player chooses a color, and the players take turns spinning the spinner.
- One each spin, the person whose color is spun gets 1 point.
- The winner is the first person to accumulate 10 points.

1. What are the possible outcomes on each spin?

2. Is the game fair? Explain your answer.

Suppose that the game rules remain the same but that the spinner on the right is used instead.

3. What are the possible outcomes on each spin?

4. Is this game fair? Explain your answer.

5. On the circles below, draw three different spinners, each of which would make the game fair.

6. How are your spinners the same? How are they different?