7.SP.7: Worksheet

Use the following information to answer problems 1-4. There are twenty-five students in Mr. Horn's class, fourteen girls and eleven boys. Three of boys have no siblings, and eight of the boys have at least one sibling. Four of the girls have no siblings, and ten of the girls have at least one sibling. Each of the twenty-five students' names are written on equal-sized pieces of paper and placed in a bowl. The bowl is shaken, and a name is randomly drawn from the bowl.

1. Doug Wilson is a student in this class, and he is the only person in the class with the first name Doug. What is the probability that Doug will be selected?

2. What is the probability that a girl will be selected?

3. What is the probability that a boy who has no siblings will be selected?

4. What is the probability that a student with at least one sibling will be selected?

Use the following information to answer problems 5-7. A spinner is attached to the center of the circular board shown in Figure 1. A person may pay to spin the spinner. Whatever dollar amount the spinner lands on, the person wins that amount of money.
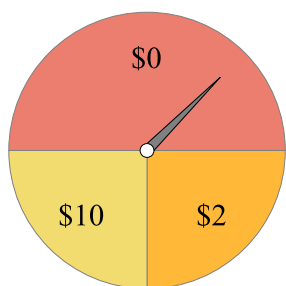

Figure 1.

5. What is the probability that a person will win zero dollars?

6. What is the probability that a person will win ten dollars?

7. What is the probability that a person will win more than zero dollars?

Use the following information to answer problems 8-10. Ken, a seventh grade student, was asked to spin a penny 100 times and record how many times a heads came up and how many times a tails came up. Before doing the experiment, Ken predicted that the probability of getting a heads and the probability of getting a tails were both 0.5. When the experiment was complete Ken counted 78 tails and 22 heads.

8. According to Ken's results, what is the estimated probability of spinning a penny and landing on tails?

9. According to Ken's experimental results, predict how many heads Ken would get if he were to spin the penny 200 times.

10. Were Ken's results consistent with his predictions? Explain.