

Carnival Tycoon Project: Lesson 3 Activity 1

Name: _____
Period: _____

Directions: Use the CODAP Coin Flipper, Dice Roller, and Spinner apps to generate empirical data. Compare to theoretical data for each of the instances.

1. Open the Coin Flipper app. Collect data from 1 trial of 1000 coin flips. Complete the simple data chart in the space below.

Heads

Tails

% Heads = _____

% Heads (as a decimal) = _____

2. Open the Die Roller app. Collect data from 1000 dice rolls. Complete the simple data chart in the space below. Tally up the % of prime numbers. Hint: You will need to create a graph, set the axes, and group the data into bins to get the specific number of prime numbers. See video explanation.

1 2 3 4 5 6 $\frac{\text{prime \#s}}{1000 \text{ flips}} = \text{_____}$ (write as a decimal)

4. Calculate the experimental probability of rolling a prime number, and the experimental probability of flipping heads. Show work.

5. Open the Spinner app. Create a spinner with 9 equal pie-shaped sections. Collect data from 100 spins. Complete the simple data chart in the space below. Tally up the % of "5"s from the data.

1 2 3 4 **5** 6 7 8 9 $\frac{\# \text{ of } 5\text{s}}{100 \text{ spins}} = \underline{\hspace{2cm}}$ (decimal)

6. Calculate the experimental probability of getting a 5 on the spinner, and of getting heads on the coin flip. Show your work below.

7. Calculate the experimental probability of getting an odd number (1,3,5,7, or 9) on the spinner, and of getting heads on a coin flip. Show your work below.

8. Which of the empirical results most closely compared to the theoretical results? Why do you think this was the case?