Carnival Tycoon Project: Lesson 3 Activity 2
Dependent Event Probabilities

Name:_____

Period:_____

Directions: Use the CODAP Card Shuffler and Bag of Chips apps to generate empirical data. Compare to theoretical data for each of the instances.

1. Open the Card Shuffler app. Uncheck the "with replacement" box. Choose one card. Repeat until you have data from 100 draws. Determine the number of Jokers chosen by putting the data into a graph in CODAP (see video description). Record data below.

<u># of Jokers</u>   <u>% Jokers</u>   <u>% Jokers (as a decimal)</u> = _____

2. Using the data collected in this experiment, calculate the chance of getting a Joker after another Joker has **already been chosen** from the deck. Show all work.

3. Open the Bag of Chips app. Put 6 chips in the bag and choose 6 chips out of the bag **w/o replacing them**. Do this 10 times. Examine the data and record the number of times the first pick was even and the second pick was odd.

# of times the first pick was even and the 2nd pick was odd = _____ /10

%_____

_____ (as a decimal)

4. Do the exact same experiment as #3- except this time record the number of times the first number is less than 3 and the second number is greater than 2.

# of times the first pick is less than 3 and the 2nd pick is greater than 3 = _____ /10

%_____

_____ (decimal)

5. How did your data from these three experiments compare to the expected data (look at the notes)?

5. What was the main limitation of this second activity compared to the first one? How would you suggest changing the directions in order to obtain more reliable results?

6. Why are dependent events generally more difficult to calculate?