Module #9 Test REVIEW!

1) Event Q is more likely to occur than event T. The probability of event T is $\frac{1}{2}$.

   What is a possible probability of event Q?
   P(Q) = _____

2) Arianne drives by a stop light near her home once every morning. The stop light has red, yellow, and green lights. She wants to know the probability of the light being red on two mornings.

   Which list represents the sample space for two mornings at the stop light?
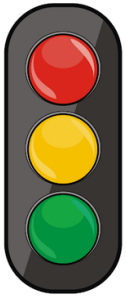
   A.   red, yellow, green
   B.   red/red, yellow/yellow, green/green
   C.   red/yellow, red/green, yellow/green, yellow/red, green/yellow, green/red
   D.   red/red, red/yellow, red/green, yellow/red, yellow/yellow, yellow/green, green/red, green/yellow, green/green

3) A newborn baby is equally likely to be male or female. What is the probability that a mother's first three children will all be girls?

4) Ashley rolls two fair number cubes each numbered 1 through 6. She needs to roll a sum of 10 or less to win a game. She rolls the number cubes one at a time. She rolls a 6 with the first number cube.

   What is the probability that Ashley will win the game?

5) What is the probability you would select the letter I from tiles containing the word "PROBABILITY"?

6) The table shows the number of students in Ellen's class who voted for different field trip destinations. What is the relative frequency that a student chose the nature center?

Destination Choice	Frequency
Museum	7
Zoo	8
Nature Center	6
State Park	7

7) A spinner with 8 equal-size sections labeled as shown is spun 200 times. How many times would you expect to spin a consonant?

What is the probability of spinning a consonant and then another consonant?

8) James spins a spinner with 4 equal-size sections that are colored red, blue, green, and yellow 30 times. Penelope selects a marble at random from a bag with 5 red marbles, 7 blue marbles, 2 green marbles, and 3 yellow marbles. She then replaces the marble and repeats the experiment 30 times. The frequency bar graphs show represent each situation.

Graph A

Frequency vs Result (Red, Blue, Green, Yellow)

Graph B

Frequency vs Result (Red, Blue, Green, Yellow)
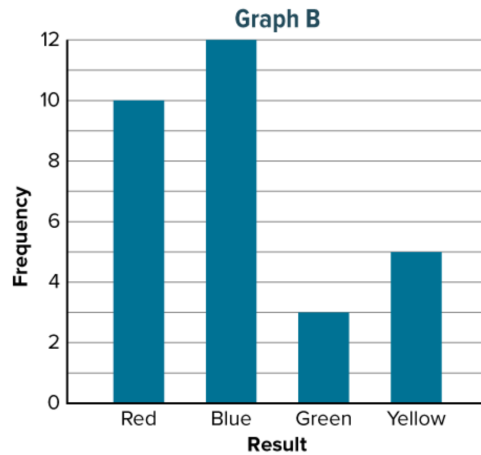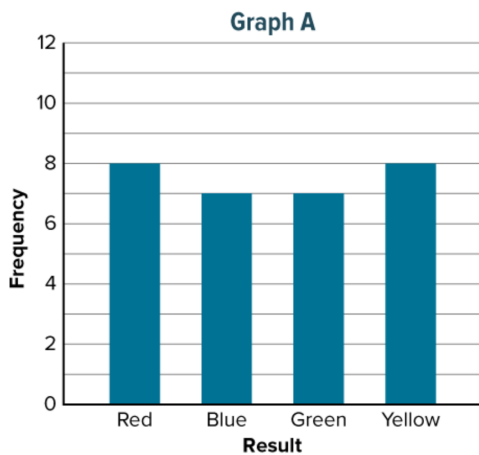
Which graph best represent the results that can be expected rom James' experiment?

Which graph best represents the results that can be expected from Penelope's experiment?

9) A deli offers the types of bread and sandwiches shown in the table. How many different sandwich combinations can be made?

Type of Bread	Type of Sandwich
white	chicken
wheat	veggie
	turkey
	meatball
	club

10) Anthony is a 75% free throw shooter which means that on average he makes 3 out of 4 free throw attempts. The table shows the results of 10 trials of a simulation where "Y" represents a made free throw and "N" represents a missed free throw. According to the results of the simulation, what is the experimental probability that Anthony makes both of his next 2 free throw attempts?

Trial	1	2	3	4	5	6	7	8	9	10
First Attempt	Y	Y	N	Y	Y	N	Y	N	Y	Y
Second Attempt	N	Y	Y	N	Y	Y	N	Y	Y	Y

11) Nikki designs and conducts a computer simulation with 20 trials and uses the data to create the relative frequency bar graph shown. The graph shows the relative frequency of the number of rolls needed in order to roll all of the different numbers on a number cube.
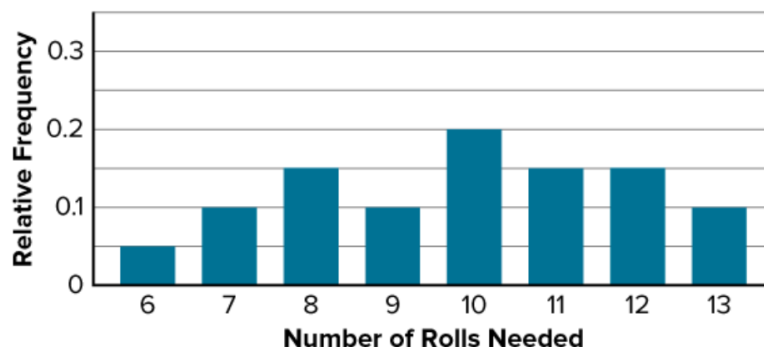
According to the results of the simulation, what is the experimental probability that 11 or more rolls are needed to roll all of the different numbers?

12) The table shows the amount of produce sold at Wooster's farmers market Saturday morning.

TYPE OF PRODUCE	NUMBER SOLD
apples	50
pumpkins	60
squash	40

If 320 pieces of produce are expected to be sold in the afternoon, how many apples would you expect to be sold?

13) Mr. Veney designed a number generator to produce the integers 1 to 5. He then decided to run the generator 300 times. The results are shown:

Integer	Frequency
1	36
2	41
3	109
4	62
5	52

If Mr. Veney runs the generator a total of 5,000 times, how many times would you expect the integer 5 to be produced?

14) Liz flips a coin and rolls a standard number cube. What is the probability she flips tails or rolls a 6? What is the probability she flips tails and rolls a 6?

15) Mrs. Dotson groups her class into 4 groups of equal size, named Gryffindor, Hufflepuff, Ravenclaw and Slytherin. Each day she selects one group at random to read aloud. The groups selected for 6 days are shown:

DAY	GROUP
1	Hufflepuff
2	Ravenclaw
3	Ravenclaw
4	Hufflepuff
5	Hufflepuff
6	Slytherin
7	Ravenclaw
8	Slytherin

Which group's observed frequency of being selected is closest to its expected frequency?