



Name:

Date:

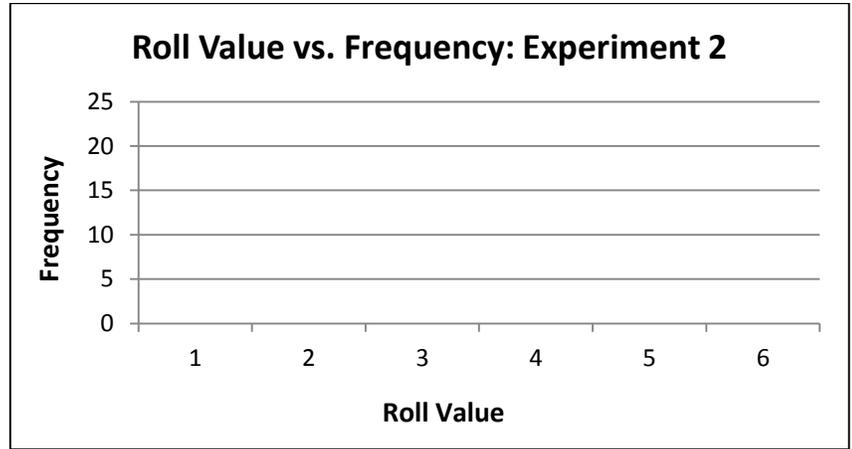
### Part 2: Dice Rolling Experiment

Below are the results of an experiment tossing a single 6-sided die.

Complete the histogram below. (4 marks A)

Frequency Distribution  
Table Experiment 2

Roll	Frequency
1	22
2	11
3	16
4	10
5	17
6	14
<b>Total</b>	90



Fill in the probability tables below for the above experiment, and answer any questions asked. (7K, 3A)

Experimental Probability Table

Roll Value	Fractional Probability	Decimal Probability	Percentage Probability
1			
2			
3			
4			
5			
6			

1. What is the **theoretical** probability of rolling any given number on a 6-sided die?

2. Are any of the experimental probabilities **exactly** what the theoretical probabilities would predict?

3. Which experimental probability is the farthest from the theoretical probability? How far off is it?

Explain the difference between **Experimental Probability** and **Theoretical Probability**. You may use an example if you wish. (3 marks C)

Name:

Date:

### Part 3: Gumball machine

Boathouse has a gumball machine filled with 50 gum balls. If you get a black gum ball you get a free poutine! The gum balls are distributed as follows:

12 red

15 blue

10 yellow

8 green

5 black

1. What is the probability of winning a free poutine? (1 mark A)
2. What is the probability of NOT winning a free poutine? (1 mark A)
3. What is the probability of winning two free poutines in a row? (2 marks A)
4. What is the probability of buying one gumball and having it be red or blue? (2 marks A)
5. What is the probability of getting a green gumball, **then** a yellow gumball? (2 marks A)
6. What is the probability of getting 4 blue gum balls in a row? (3 marks A)
7. What is the probability of getting all 5 black gum balls in a row? (5 marks A)