

## Lesson 1.5 Comparing Experimental and Theoretical Probabilities

Compare the theoretical probability to the experimental probability. Express each probability as a fraction in simplest form.

7. Allison rolls a die numbered 1 through 6. The results are shown in the table below.

- a. What is the experimental probability of rolling a 6?

1/12

- b. What is the theoretical probability of rolling a 6? 1/6

- c. Which probability is greater? theoretical

How much greater? 1/12

- d. What is the experimental probability of rolling an even number? 5/9

- e. What is the theoretical probability of rolling an even number? 1/2

- f. Which probability is greater? experimental How much greater? 1/18

Result	Frequency
1	4
2	9
3	7
4	8
5	5
6	3

8. Allison continues to roll the die. The results are shown in the table below.

- a. What is the experimental probability of rolling a 6?

1/6

- b. What is the theoretical probability of rolling a 6? 1/6

- c. Which probability is greater? They are the same

How much greater? 0

- d. What is the experimental probability of rolling an even number? 71/144

- e. What is the theoretical probability of rolling an even number? 1/2

- f. Which probability is greater? theoretical How much greater? 1/144

Result	Frequency
1	23
2	22
3	22
4	25
5	28
6	24