

# Experimental & Theoretical Probability

Name: \_\_\_\_\_

You spin a spinner that has 15 equal-sized sections numbered 1 to 15. Find the theoretical probability of landing on the given section(s) of the spinner.

1.  $P(15)$

2.  $P(\text{odd number})$

3.  $P(\text{even number})$

4.  $P(\text{not } 5)$

5.  $P(\text{less than } 5)$

6.  $P(\text{greater than } 8)$

7.  $P(\text{multiple of } 5)$

8.  $P(\text{less than } 16)$

9.  $P(\text{prime number})$

10. You roll a number cube. What is the probability that you will roll a number less than 5?

11. The probability that a spinner will land on a red section is  $\frac{1}{6}$ . What is the probability that the spinner will not land on a red section?

One hundred twenty randomly selected students at Roosevelt High School were asked to name their favorite sport. The results are shown in the table. Find the experimental probability that a student selected at random makes the given response.

12.  $P(\text{basketball})$

13.  $P(\text{soccer})$

14.  $P(\text{baseball})$

15.  $P(\text{football})$

**Favorite Sport Survey**

Sport	Number of Responses
Basketball	30
Baseball	22
Football	34
Soccer	20
Other	14

16. A meteorologist says that the probability of rain today is 35%. What is the probability that it will not rain?

17. Hank usually makes 11 out of every 20 of his free throws. What is the probability that he will miss his next free throw?

18. There are 250 freshmen at Central High School. You survey 50 randomly selected freshmen and find that 35 plan to go to the school party on Friday. How many freshmen are likely to be at the party?

19. The Widget Company randomly selects its widgets and checks for defects. If 5 of the 300 selected widgets are defective, how many defective widgets would you expect in the 1500 widgets manufactured today?