

Extra Practice ■ Chapter 8

LESSON 8-1

Determine whether each event is impossible, unlikely, as likely as not, likely, or certain.

1. flipping a coin and getting heads twelve times in a row
2. drawing a green bead from a bag of white and red beads
3. The probability of rolling a 2 on a number cube is $\frac{1}{6}$. What is the probability of not rolling a 2?

LESSON 8-2

4. Bess bowls a strike on 6 out of 15 tries. What is the experimental probability that she will bowl a strike on her next try? Write your answer as a ratio, as a decimal, and as a percent.
5. For the past 10 days, a city planner has counted the number of northbound cars that pass through a particular intersection. During that time, 200 or more cars were counted 9 out of 10 days.
 - a. What is the experimental probability that there will be 200 or more northbound cars passing through the intersection on the eleventh day?
 - b. What is the experimental probability that there will be fewer than 200 northbound cars passing through the intersection on the eleventh day?

LESSON 8-3

Find the probability of each event. Write your answer as a ratio, as a decimal, and as a percent.

6. rolling a number less than 5 on a fair number cube
7. randomly drawing a pink sock out of a drawer of 6 pink, 4 black, 8 white, and 2 blue socks all of the same size

LESSON 8-4

8. Ronald flips a coin and rolls a number cube at the same time. Use a table to find all the possible outcomes. What is the theoretical probability of each outcome?
9. For lunch, Amy can choose from a salad, a taco, a hamburger, or a fish fillet. She can drink lemonade, milk, juice, or water. Use a tree diagram to find all of the possible outcomes of choosing one food item and one drink. If Amy chooses at random, what is the probability that she will choose a fish fillet and juice?
10. A café makes 23 types of soup. You can get each type in a bowl, a dish, or a cup. How many outcomes are possible?

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LESSON 8-5

Determine whether each set of events is disjoint. Explain.

11. rolling a number cube and getting a number less than 3 or a number greater than 3
12. choosing a multiple of 10 or a multiple of 5 from a set of 30 cards numbered 1 to 30

Find the probability of each set of disjoint events.

13. selecting a red marble or a blue marble from a bag that contains 6 green marbles, 3 blue marbles, 4 white marbles, and 7 red marbles
14. rolling either a 5 or an even number on a number cube
15. choosing either an *S* or a *T* from the word ESTABLISHMENT

LESSON 8-6

Decide whether each set of events is independent or dependent.

Explain your answer.

16. Mr. Fernandez's class contains 14 boys and 16 girls. Mr. Fernandez randomly picks a boy and a girl to represent the class at the school spelling bee.
17. Mrs. Rogers's class received new math books. Mrs. Rogers selects a student to hand out the new books. She also picks a second student to collect the old books.
18. There are 52 playing cards in a standard card deck. Alex draws a card and holds onto it while Suzi draws a card.

Find the probability of each set of independent events.

19. flipping 2 coins at the same time and getting heads on both coins
20. drawing a 3 from 5 cards numbered 1 through 5 and rolling an even number on a number cube

LESSON 8-7

21. Based on a sample survey, a local newspaper stated that 26% of the population has a pet dog. Out of 600 people, how many people can you predict will have a pet dog?
22. If you roll a number cube 54 times, how many times do you expect to roll a number less than 3?
23. A promotion team is selling tickets for unreserved seats to a concert. The promotion team estimates that 75% of the people who purchase a ticket will attend the concert. If the stadium seats 15,000 people and the promotion team wants to have all of the seats full at the concert, how many concert tickets should they sell?