CRCT GPS Practice ▪ Chapter 11

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?

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 fraction, 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 not be 200 or more northbound cars passing through the intersection on the eleventh day?

6. Ronald flips a coin and rolls a number cube at the same time. What are all the possible outcomes? How many outcomes are in the sample space?

7. For lunch, Amy can choose from a salad, a taco, a hamburger, or a fish fillet. She can drink lemonade, milk, juice, or water. What are all the possible outcomes? How many outcomes are in the sample space?

8. A café makes 23 flavors of ice cream. You can get each flavor in a waffle cone, a sugar cone, a cake cone, or a cup. How many outcomes are possible?

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

9. rolling a number less than 5 on a fair number cube

10. 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

There are 12 boys and 14 girls in Mr. Grimes' class. Each student turns in an essay. Find the theoretical probability of each event when Mr. Grimes randomly selects an essay.

11. selecting a boy's essay

12. selecting a girl's essay

LESSON 11-5

Decide whether each set of events is independent or dependent. Explain your answer.

13. 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.

14. 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.

15. 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.

16. flipping 2 coins at the same time and getting heads on both coins

17. drawing a 3 from 5 cards numbered 1 through 5 and rolling an even number on a number cube

LESSON 11-6

18. Venus has decided to have a 2-color paint job done on her car. There are 6 paint colors from which to choose. How many combinations of 2 colors are possible?

19. Philip has 5 different coins. How many combinations of 3 coins can he make from the 5 coins?

20. A juice bar offers 8 different juices. You and a friend want to each try a different blend. How many different combinations of 2 juices are possible?

LESSON 11-7

21. In how many different ways can Ralph, Randy, and Robert stand in line at the movie theater?

22. Roseanne and Rita join Ralph, Randy, and Robert at the movie theater. In how many different ways could they all stand in line?

23. Doris has a $1 bill, a $2 bill, a $5 bill, a $10 bill, a $20 bill, and a $50 bill. In how many different ways can she arrange them in a stack?

24. In how many different ways can 5 students be matched up with 5 mentors?