11.1.1 Probability

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

1. randomly drawing a red or pink card from a deck of red and pink cards

2. flipping a coin and getting tails

3. rolling a 6 on a number cube five times in a row

4. The probability of rolling a 5 or 6 with a number cube is $\frac{1}{3}$. What is the probability of not rolling a 5 or 6?

5. The probability of randomly drawing a green marble from a bag of green, red, and blue marbles is $\frac{3}{5}$. What is the probability of randomly drawing a red or blue marble?

6. Tim rarely spends more than 30 minutes watching TV in the afternoon. If Tim began watching TV at 4:00 P.M., would you expect that he is still watching TV at 5:00 P.M? Explain.

11.1.2 Experimental Probability

7. **Sports** Jack hit a baseball on 13 out of 30 tries during practice. What is the experimental probability that he will hit the ball on his next try? Write your answer as a fraction, as a decimal, and as a percent.

8. Cam hit the bull's-eye in darts 8 times out of 15 throws. What is the experimental probability that Cam's next throw will hit the bull's-eye?

9. For the past two weeks, Benita has been recording the number of people at Eastside Park at lunchtime. During that time, there were 50 or more people at the park 9 out of 14 days.
    a. What is the experimental probability that there will be 50 or more people at the park during lunchtime on the fifteenth day?

    b. What is the experimental probability that there will not be 50 or more people at the park during lunchtime on the fifteenth day?

Probability

11.1.3 Make a List to Find Sample Spaces

10. At noon, Aretha can watch a football game, a basketball game, or a documentary about horses on TV. At 3:00, she can watch a different football game, a movie, or a concert. What are all the possible outcomes? How many outcomes are in the sample space?

11. A spinner is divided into fourths and numbered 1 through 4. Jory spins the spinner and tosses a coin. What are all the possible outcomes? How many outcomes are in the sample space?

12. Berto tosses a coin and spins the spinner at right. What are all the possible outcomes? How many outcomes are in the sample space?

13. For breakfast, Clarissa can choose from oatmeal, cornflakes, or scrambled eggs. She can drink milk, orange juice, apple juice, or hot chocolate. What are all the possible outcomes? How many outcomes are in the sample space?

Review 11.1 / Introduction to Probability

14. A pizza shop offers thick crust, thin crust, or stuffed crust. The choices of toppings are pepperoni, cheese, hamburger, Italian sausage, Canadian bacon, onions, bell peppers, mushrooms, and pineapple. How many different one-topping pizzas could you order?

11.1.4 Theoretical Probability

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

15. randomly drawing a heart or a club from a shuffled deck of 52 cards with 13-card suits: diamonds, hearts, clubs, and spades

16. randomly drawing a purple disk from a game with 13 red, 13 purple, 13 orange, and 13 white disks of the same size and shape

17. randomly drawing one of the two blank Scrabble tiles from a complete set of 100 Scrabble tiles

Sifu has 6 girls and 8 boys in his karate class. He randomly selects one student to demonstrate a self-defense technique. Find the probability of each event.

18. selecting a girl   19. selecting a boy