

## **Math Test**

### **Ratios**

1. **What is the ratio of 8 to 12 in its simplest form?**
  - A) 1:3
  - B) 2:3
  - C) 3:4
  - D) 4:3
  
2. **If the ratio of boys to girls in a class is 3:4, how many girls are there if there are 18 boys?**
  - A) 24
  - B) 21
  - C) 18
  - D) 12
  
3. **A recipe calls for 2 cups of sugar for every 5 cups of flour. How much sugar is needed if you use 15 cups of flour?**
  - A) 3 cups
  - B) 6 cups
  - C) 10 cups
  - D) 7 cups
  
4. **In a school, the ratio of teachers to students is 1:20. If there are 500 students, how many teachers are there?**
  - A) 20
  - B) 25
  - C) 30
  - D) 50
  
5. **A map uses a scale of 1:100. If the actual distance between two towns is 50 kilometers, what is the distance on the map?**
  - A) 50 centimeters
  - B) 0.5 centimeters
  - C) 5 centimeters
  - D) 10 centimeters

## Experimental Probability

6. A coin is flipped 50 times and lands on heads 30 times. What is the experimental probability of flipping heads?
- A) 0.3
  - B) 0.5
  - C) 0.6
  - D) 0.7
7. A die is rolled 40 times, and the number 4 appears 10 times. What is the experimental probability of rolling a 4?
- A)  $\frac{1}{2}$
  - B)  $\frac{1}{4}$
  - C)  $\frac{1}{3}$
  - D)  $\frac{1}{6}$
8. In a survey, 80 out of 200 people said they prefer chocolate ice cream. What is the experimental probability that a randomly selected person prefers chocolate ice cream?
- A)  $\frac{1}{4}$
  - B)  $\frac{2}{5}$
  - C)  $\frac{4}{5}$
  - D)  $\frac{1}{5}$
9. A bag contains 5 red marbles, 7 blue marbles, and 8 green marbles. If you randomly pick one marble from the bag 40 times and get a red marble 10 times, what is the experimental probability of picking a red marble?
- A)  $\frac{1}{2}$
  - B)  $\frac{1}{4}$
  - C)  $\frac{1}{3}$
  - D)  $\frac{1}{5}$
10. Out of 60 rolls of a fair six-sided die, the number 3 is rolled 15 times. What is the experimental probability of rolling a 3?
- A)  $\frac{1}{4}$
  - B)  $\frac{1}{6}$
  - C)  $\frac{1}{3}$
  - D)  $\frac{1}{5}$