

Probability is defined as the likelihood that something will happen. The formula for solving probability questions is written as a ratio or fraction, with the number of favorable (positive) outcomes over the total number of possible outcomes. The ratio or fraction must be reduced to lowest terms.

$$\frac{\text{Number of favorable (positive) outcomes}}{\text{Total number of possible outcomes}}$$

Select the best answer for the following questions and type it on the line provided.

1. A large basket of fruit contains 5 oranges, 3 apples and 4 bananas. If a piece of fruit is chosen at random, what is the probability of getting an orange or a banana? \_\_\_\_\_

- a.  $\frac{1}{5}$
- b.  $\frac{5}{9}$
- c.  $\frac{3}{4}$
- d.  $\frac{5}{12}$

Questions 2 through 4 refer to the following question.

A standard deck of 52 cards is shuffled and the top card is placed on the table. There are four suits: hearts, diamonds, spades and clubs. Each suit has an ace, king, queen, jack, 10, 9, 8, 7, 6, 5, 4, 3, and 2. The deck of cards is divided evenly into 4 suits of 13 cards each.

2. When drawing a single card, what is the probability that the card is a diamond? \_\_\_\_\_

- a.  $\frac{1}{13}$
- b.  $\frac{1}{4}$
- c.  $\frac{13}{1}$
- d.  $\frac{4}{13}$

3. When drawing a single card, what is the probability that the card is not a queen? \_\_\_\_\_

a.  $\frac{1}{52}$

b.  $\frac{12}{13}$

c.  $\frac{13}{12}$

d.  $\frac{52}{1}$

4. When drawing a single card, what is the probability that the card is not a club? \_\_\_\_\_

a.  $\frac{1}{52}$

b.  $\frac{1}{4}$

c.  $\frac{3}{4}$

e.  $\frac{4}{13}$

Questions 5 through 9 refer to the following information.

A glass jar contains 6 red marbles, 5 green marbles, 8 blue marbles and 3 yellow marbles. If a single marble is chosen at random from the jar, what is the probability of...

Express answers in fraction form.

5. choosing a red marble? \_\_\_\_\_

6. choosing a green or yellow marble? \_\_\_\_\_

7. choosing a blue or yellow marble? \_\_\_\_\_

8. not choosing a blue marble? \_\_\_\_\_

9. not choosing a red marble? \_\_\_\_\_