Probability

1. If three fair coins are tossed simultaneously, what is the probability of getting at least two heads?

A) $\frac{1}{2}$ B) $\frac{3}{8}$ C) $\frac{5}{8}$ D) $\frac{3}{4}$

2. A fair coin is tossed five times. What is the probability of getting exactly three tails?

A) $\frac{3}{8}$ B) $\frac{10}{32}$ C) $\frac{10}{16}$ D) $\frac{5}{16}$

3. Two fair coins are tossed. What is the probability of getting at least one tail?

A) $\frac{1}{4}$ B) $\frac{3}{4}$ C) $\frac{1}{2}$ D) $\frac{2}{3}$

4. A single fair die is rolled once. What is the probability of getting a prime number?

A) $\frac{1}{2}$ B) $\frac{2}{3}$ C) $\frac{1}{3}$ D) $\frac{5}{6}$

5. A single card is drawn from a well-shuffled deck of 52 cards. What is the probability that the card drawn is a red face card?

A) $\frac{3}{26}$ B) $\frac{2}{13}$ C) $\frac{1}{4}$ D) $\frac{5}{26}$

6. Two cards are drawn one after the other without replacement from a deck of 52 cards. What is the probability that both cards are Aces?

A) $\frac{1}{169}$ B) $\frac{2}{221}$

C) $\frac{1}{221}$ D) $\frac{1}{13}$

7. Five cards are drawn one by one without replacement from a well-shuffled deck of 52 cards. What is the probability that exactly 3 of them are face cards (King, Queen, or Jack)?

A) $\frac{198}{4421}$ B) $\frac{564}{16660}$

C) $\frac{990}{4165}$ D) $\frac{55}{833}$

8. A bag contains 5 red, 4 green, and 3 blue marbles. Two marbles are drawn at random. What is the probability that at least one of them is red?

A) $\frac{19}{33}$ B) $\frac{23}{33}$ C) $\frac{15}{22}$ D) $\frac{28}{33}$

9. A jar contains 10 white, 6 red, and 4 black marbles. If 3 marbles are drawn randomly, what is the probability that at least one of them is black?

A) $\frac{16}{21}$ B) $\frac{18}{29}$ C) $\frac{20}{21}$ D) $\frac{29}{57}$

10. A bag contains 6 red, 4 green, and 5 blue marbles. If 2 marbles are drawn at random, what is the probability that both are of the same color?

A) $\frac{4}{7}$ B) $\frac{5}{14}$ C) $\frac{31}{105}$ D) $\frac{2}{5}$

11. A bag contains 8 red, 5 blue, and 7 green marbles. If two marbles are drawn at random, what is the probability that both are of the same color?

A) $\frac{59}{190}$ B) $\frac{109}{57}$

C) $\frac{75}{171}$ D) $\frac{89}{210}$

12. A fair coin is tossed 4 times. What is the probability of getting exactly 2 heads?

A) $\frac{3}{8}$ B) $\frac{1}{2}$ C) $\frac{5}{16}$ D) $\frac{6}{16}$

13. Two fair dice are rolled together. What is the probability that the sum of the numbers obtained is 8?

A) $\frac{7}{36}$ B) $\frac{1}{9}$ C) $\frac{1}{6}$ D) $\frac{5}{36}$

14. From a deck of 52 playing cards, two cards are drawn at random. What is the probability that both are Queens?

A) $\frac{1}{325}$ B) $\frac{1}{169}$

C) $\frac{1}{221}$ D) $\frac{1}{13}$

15. A bag contains 5 white, 4 black, and 6 red marbles. If two marbles are drawn at random, what is the probability that both are red?

A) $\frac{1}{7}$ B) $\frac{1}{3}$ C) $\frac{5}{21}$ D) $\frac{2}{5}$

16. A committee of 3 members is to be formed from 5 men and 4 women. What is the probability that the committee consists of exactly 2 men and 1 woman?

A) $\frac{5}{9}$ B) $\frac{10}{21}$ C) $\frac{2}{5}$ D) $\frac{3}{7}$

17. Aman speaks the truth 70% of the time, and Rohit speaks the truth 80% of the time. If both make a statement on the same fact, what is the probability that their statements contradict each other?

A) 0.14 B) 0.38 C) 0.26 D) 0.30

18. Three friends, Rahul, Sam, and Vijay, speak the truth 60%, 75%, and 80% of the time, respectively. If they all state the same fact, what is the probability that at least one of them is telling the truth?

A) 0.90 B) 0.96

C) 0.98 D) 0.99

KEY:

1-A, 2-D, 3-B, 4-A, 5-A, 6-C, 7-D, 8-C, 9-D, 10-C, 11-A, 12-A, 13-D, 14-C, 15-A, 16-B, 17-B, 18-C.