

Precalculus Practice for Semester Exam - Ch. 13 Probability

1. How many ways can 6 different books be stacked on a shelf?
2. Find the number of different ways the letters of the word CARS can be arranged if the first letter must be C.
3. How many three-digit numbers can be made from the ten possible digits, 0–9, if the first digit cannot be 0?
4. How many committees of 4 people can be chosen from a group of 8 people?
5. How many teams of 3 students can be chosen from a group of 12 students?
6. From a group of 5 men and 6 women, how many committees of 4 men and 3 women can be formed?
7. A bag contains 4 red, 6 white, and 7 blue marbles. How many ways can 3 red, 2 white, and 4 blue marbles be chosen?
8. How many six-letter permutations can be formed from the letters of the word MADRID?
9. How many ways can 4 children arrange themselves in a circle?
10. A box contains 4 red marbles, 5 blue marbles, and 7 green marbles. What is the probability that a marble selected at random will be a red marble?
11. Two cards are drawn at random from a standard deck of 52 cards. What is the probability that both are red?
12. Two coins are taken at random from a bank containing 4 dimes, 8 quarters, and 3 nickels. What is the probability that both coins will be quarters?
13. The probability of an event is $\frac{2}{9}$. Find the odds against this event occurring.
14. Two number cubes are tossed. Find the probability that no 3s are rolled.
15. Two coins are tossed. Find the probability that one coin is a head and the other is a tail.
16. Find $P(\text{four tails})$ if four coins are tossed.

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Answer Section

SHORT ANSWER

1. 720
2. 6
3. 900
4. 70
5. 220
6. 100
7. 2100
8. 360
9. 6
10. $\frac{1}{4}$
11. $\frac{25}{102}$
12. $\frac{4}{15}$
13. 7 to 2
14. $\frac{25}{36}$
15. $\frac{1}{4}$
16. $\frac{1}{16}$