

Probability of Independent and Dependent Events

There are 5 black marbles, 3 white marbles, 2 yellow marbles, and 2 red marbles. Suppose you select one at random. Find the probability for each of the following.

1. a black marble
2. a red or white marble
3. a black, yellow, or white marble
4. not a white marble
5. not a white or red marble

A die is rolled, then a card is drawn from a standard deck of playing cards. Find the probability of each of the following.

6. a six, then a jack of spades
7. a four, then a club
8. an even number, then a queen
9. a number less than 5, then an ace
10. a prime number, then a club or spade

In the bag, there are 4 black marbles, 5 white marbles, and 8 green marbles. Once a marble is drawn, it is not replaced. Find the probability for each of the following.

11. 2 black marbles in a row
12. a green marble, then a white, then a black
13. 3 white marbles in a row
14. 2 black marbles, then 2 white marbles
15. 5 black marbles

A three-digit number is chosen at random. Once a digit 0-9 has been chosen, it cannot be used again. Find the probability for each of the following.

16. The number is 234.
17. The number is 302.
18. The number is even.