EXERCISES 2

1. A bag contains 3 red marbles and 4 blue marbles. Two marbles are drawn at random without replacement. If the first marble drawn is red, what is the probability the second marble is blue?

2. Two cards are chosen at random without replacement from a pack of 52 playing.
   If the first card chosen is an Ace, what is the probability the second card chosen is a King?

3. A box contains 5 green pencils and 7 yellow pencils. Two pencils are chosen at random from the box without replacement. What is the probability they are both yellow?

4. In Exton School, 60% of the boys play baseball and 24% of the boys play baseball and football. What percent of those that play baseball also play football?

5. 45% of the children in a school have a dog, 30% have a cat, and 18% have a dog and a cat. What percent of those who have a cat also have a dog?

6. How many permutations of 3 **different** digits are there, chosen from the ten digits 0 to 9 inclusive?

7. How many different committees of 5 people can be chosen from 10 people?

8. A special type of password consists of four **different** letters of the alphabet, where each letter is used only once. How many different possible passwords are there?

9. An encyclopedia has eight volumes. In how many ways can the eight volumes be replaced on the shelf?

10. A restaurant offers 5 choices of appetizer, 10 choices of main meal and 4 choices of dessert. A customer can choose to eat just one course, or two different courses, or all three courses. Assuming all choices are available, how many different possible meals does the restaurant offer?

Answers

1. 0.67
2. 0.0784
3. 0.3182
4. 0.4
5. 0.6
6. 720
7. 252
8. 358800
9. 40320
10. 329