
Exercise - Rules of Probability

Questions 1 and 2 refer to the following information.

A bag contains 15 balls, numbered 1 through 15.

1
 What is the probability of selecting a number that is odd or a multiple of 5?

2
 A ball is selected at random then replaced in the bag. A second selection is then made. What is the probability that the first number is a prime number and the second number is a multiple of 3?

3
 $S = \{-5, -2, -1, 4\}$ $T = \{-2, 3, 7\}$
 Product $p = s \cdot t$ is formed from the two sets above, in which s is a number from set S and t is a number from set T . What is the probability that the product $s \cdot t$ will be a positive number?

Questions 4 and 5 refer to the following information.

Janis is making a flight reservation for her business trip. The travel agent informs that the probability that her flight to Phoenix will arrive on schedule is 90% and the probability that her flight from Phoenix to Atlanta will arrive on schedule is 80%.

4
 What is the probability that both flights arrive on schedule?

5
 What is the probability that her flight to Phoenix is on schedule but her flight from Phoenix to Atlanta is not?

6
 In a box of 12 headlamps 3 are defective. If you choose two headlamps without replacement, what is the probability that both headlamps are defective?