

Name _____

Date _____

Multiplication Rule of Probability - Step-by-Step Lesson



Christy has a bag of candies. In the bag there are 5 red colors, 3 orange colors and 8 green colors. She takes one candy, record its color and put it back in the bag. She then draws another candy. What is the probability of taking out a green candy followed by the red candy?

Explanation:

As per the conditions of multiplication rule we need to find

$$P(\text{green}) \times P(\text{red}).$$

$$P(\text{green}) = 8/16$$

$$P(\text{red}) = 5/16$$

$$P(\text{green/red}) = (8/16)(5/16)$$

$$= 40/256$$

$$= 5/32$$

The events in this example were independent. Once the first candy was picked out and its color recorded, it was returned to the bag. Therefore, the probability for the second candy was not affected by what happened on the first candy.

So, the answer is 5/32.

