



Math Virtual Learning

Algebra IIB

May 14, 2020



Lesson: May 14, 2020

Objective/Learning Target:

Student will work and practice with the multiplication rule of probability

Bell Ringer

From the previous lesson, if you have 4 red toy cars, 5 red toy dinosaurs, 7 blue socks, and 3 blue toy cars in a bag. What is the probability of grabbing a car or something red?

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Answer: 12/19

Lesson

Now we will focus on the idea of multiplication with probability. Take the time to either watch the [video](#) or read about it with examples [here](#). Once again, it is highly recommended that you both watch the video and read. Once you have a grasp, continue on to the next slide.

Practice

Determine whether the scenario involves independent or dependent events.

- 1) There are eight nickels and eight dimes in your pocket. You randomly pick a coin out of your pocket and place it on a counter. Then you randomly pick another coin. Both coins are nickels.
- 2) A bag contains four red marbles and six blue marbles. You randomly pick a marble and then return it to the bag before picking another marble. Both the first and second marbles are red.
- 3) You flip a coin twice. The first flip lands heads-up and the second flip lands tails-up.
- 4) You roll a fair six-sided die three times. The die shows an even number every time.

Find the probability.

- 5) A bag contains three red marbles and three blue marbles. You randomly pick a marble and then return it to the bag before picking another marble. The first marble is red and the second marble is blue.
- 6) A spinner has an equal chance of landing on each of its six numbered regions. You spin twice. The first spin lands in region one and the second spin lands in region three.
- 7) There are seven boys and seven girls in a class. The teacher randomly selects one student to answer a question. Later, the teacher randomly selects a different student to answer another question. The first student is a boy and the second student is a girl.
- 8) A basket contains three apples, four peaches, and three pears. You randomly select and eat three pieces of fruit. The first piece of fruit is an apple and the next two pieces are peaches.

Determine whether the scenario involves independent or dependent events.

- 1) There are eight nickels and eight dimes in your pocket. You randomly pick a coin out of your pocket and place it on a counter. Then you randomly pick another coin. Both coins are nickels.

Dependent

- 3) You flip a coin twice. The first flip lands heads-up and the second flip lands tails-up.

Independent

- 2) A bag contains four red marbles and six blue marbles. You randomly pick a marble and then return it to the bag before picking another marble. Both the first and second marbles are red.

Independent

- 4) You roll a fair six-sided die three times. The die shows an even number every time.

Independent

Find the probability.

- 5) A bag contains three red marbles and three blue marbles. You randomly pick a marble and then return it to the bag before picking another marble. The first marble is red and the second marble is blue.

$$\frac{1}{4} = 0.25$$

- 7) There are seven boys and seven girls in a class. The teacher randomly selects one student to answer a question. Later, the teacher randomly selects a different student to answer another question. The first student is a boy and the second student is a girl.

$$\frac{7}{26} \approx 0.269$$

- 6) A spinner has an equal chance of landing on each of its six numbered regions. You spin twice. The first spin lands in region one and the second spin lands in region three.

$$\frac{1}{36} \approx 0.028$$

- 8) A basket contains three apples, four peaches, and three pears. You randomly select and eat three pieces of fruit. The first piece of fruit is an apple and the next two pieces are peaches.

$$\frac{1}{20} = 0.05$$