

Lesson 10.5 Worksheet

Name: _____

Events A and B are independent. Find the indicated probability.

1.) $P(A) = 0.4$

$$P(B) = 0.6$$

$$P(A \text{ and } B) = ?$$

2.) $P(A) = \frac{1}{4}$

$$P(B) = ?$$

$$P(A \text{ and } B) = \frac{1}{5}$$

3.) $P(A) = ?$

$$P(B) = 80\%$$

$$P(A \text{ and } B) = 60\%$$

4.) $P(A) = 0.5$

$$P(B) = ?$$

$$P(A \text{ and } B) = 0.1$$

Events A and B are dependent. Find the indicated probability.

5.) $P(A) = 0.7$

$$P(B|A) = 0.5$$

$$P(A \text{ and } B) = ?$$

6.) $P(A) = \frac{4}{5}$

$$P(B|A) = ?$$

$$P(A \text{ and } B) = \frac{8}{25}$$

7.) $P(A) = 70\%$

$$P(B|A) = ?$$

$$P(A \text{ and } B) = 63\%$$

8.) $P(A) = ?$

$$P(B|A) = 0.4$$

$$P(A \text{ and } B) = 0.2$$

Let n be a randomly selected integer from 1 to 40. Find the indicated probability.

9.) n is prime given that it is even

10.) n is 15 given that it is a multiple of three

11.) n is 32 given that it is greater than 25

12.) n is prime given that it has two digits

Find the probability of drawing the given cards from a standard deck of 52 cards (a) with replacement and (b) without replacement.

13.) A club, then a spade

14.) A queen, then an ace

15.) A face card, then a 6

16.) A 10, then a 2

17.) A king, then a queen, then a jack

18.) A spade, then a club, then another spade

19.) Each drawer in a 5-drawer file cabinet has 50 folders. You are searching for some information that is in one of the folders, but you do not know which folder has the information.

a.) What is the probability that the information is in the first drawer you choose?

b.) What is the probability that the information is **not** in the first folder you choose?

c.) What is the probability that the information is **not** in the first six folders you choose?

20.) Angela usually rushes to make it to the bus stop in time to catch the school bus, and will often miss the bus if it is early. The bus comes early to Angela's stop 28% of the time. What is the probability that the bus will come early *at least once* during a 5 day school week?

21.) The probability of selecting a rotten apple from a basket is 14%. What is the probability of selecting 3 good apples when selecting 1 apple from each of 3 different baskets?