Name: _____ Date: _____

Unit #8 Review

In a bowl of marbles, there are 10 red ones, 6 green ones, and 8 blue ones.

_____ 1. If a marble is chosen at random from the bowl, find P(red one or a blue one)?

_____ 2. If two marbles are chosen at random with replacement, find P(red and a blue)?

_____ 3. If two marbles are chosen at random without replacement,
find P(they are both red)?

_____ 4. Mike has a drawer with 8 pairs of black socks and 12 pairs of white socks. Without looking he takes a white pair of socks out of the drawer. He does not replace it, and goes to pick another pair. What is the probability that the next pair he takes out is black?

In a survey of 450 people, 200 of whom are female, it was found that 225 prefer chocolate ice cream including 99 males. Use the table to answer the questions below.

	Males	Females	
Vanilla	151	74	225
Chocolate	99	126	225
	250	200	450

Find the probability that:

_____ 5. The person likes chocolate.

_____ 6. The person likes vanilla, given they are male.

_____ 7. The person likes vanilla or is a female.

_____ 8. Are being a male and liking chocolate independent events?

_____ 9. The probability of a randomly chosen gym student is playing basketball is 0.30. The chance that a gym student plays both basketball and football is 0.05. The chance that a gym student plays football is 0.25. What is the probability that a randomly chosen gym student plays basketball or football?

10. Assume that the following events are dependent:
  - The probability that a high school student eats breakfast is 0.8.
  - The probability that a high school senior will eat breakfast and get over 6 hours of sleep is 0.2.

  What is the probability that a high school senior will get over 6 hours of sleep, given that the person ate breakfast?
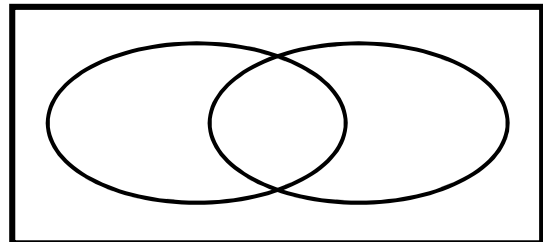
_____

11. A bag contains 5 gray tiles and 2 blue tiles. You reach in the bag and pick a blue tile. Without replacing it, what is the probability that your second pick will be gray?

_____

12. $\frac{3}{4}$ of you friends babysit for extra money. $\frac{2}{3}$ of your friends babysit and pet sit. What fraction of your friends pet sit *given* that they babysit?

_____

13. Kate has a 45% chance of making an A on her next Algebra test and a 55% chance of making an A on her economics test. What is the probability that she will make an A on both her Algebra test and economics test?

_____

Fill out the Venn diagram to the right, and answer the questions below:

Of 500 students surveyed, 300 were male. 20 were left-handed. 12 were male and left-handed.

_____ 14. P(male or left-handed)

_____ 15. P(left-handed | male)

_____ 16. P(right-handed and female)