Name _____ Period _____

Sec 2 Unit 9 Review

1. Riley entered a contest along with 50 other people. 4 will be picked at random to receive a coupon for a free ice cream cone. What is the probability that Riley will *not* be picked to receive the free ice cream?

2. What is the probability of rolling a number less than 5 on a single roll of a number cube?

3. A cafe's lunch special offers 3 different appetizers, 4 different entrés and 5 different choices of soda. How many different choices are there for ordering 1 of each?

4. How many different arrangements can be made from the word *valentine*?

5. Find $_7P_3$ and $_7C_3$.

6. What is the formula for $_nP_r$ and $_nC_r$?

7. How many ways can 8 spices be placed on a circular tray?

8. If $P(A) = \dfrac{3}{7}$ and $P(A \text{ and } B) = \dfrac{5}{14}$, find $P(B|A)$.

9. Look at the chart on page 669. Find the probability of each event. #33. The person is married, given that the person is 20 to 29 years old.

10. Find the number of district committee's that can be formed if 8 people are selected from a group of 12. Leave in factorial form.

11. If 2 marbles are randomly taken from a bag of 5 white and 3 green marbles, what is the probability of drawing a white one and a green one?

12.   A spinner that is labeled equally 1 – 8 and a coin are each spun and tossed respectively. What is the probability that the spin is a 4 and the toss is a tail?

13. The numbers 1 – 8 are put into a hat. What is the probably of selecting the number 3 or 5?

14. Find the probability that the spinner that is equally divided into 1 – 8 will land on 4 or less than 6?

15.   Find the probability of rolling less than 5 or a prime number on one toss of a number cube.

16. If $P(A^c) = \dfrac{3}{13}$, find $P(A)$.

17. Without replacement, find the probability of drawing first a blue and then second a red from a bag of 8 red, 9 yellow and 5 blue beads.

18. Find the probability of at least 2 heads in 3 tosses of a coin.

19. You flipped a coin 8 times and they were all heads. What is the probability that the next flip will be a head?

20. How many 3 letters followed by a 3 number passwords can there be if only even numbers can be used. Remember that 0 is neither odd or even.

21. How many ways can you arrange 5 red, 2 blue and 6 yellow tulips in a row?

22. If $P(A^c) = \dfrac{4}{9}$, find $P(A)$.

A $-\dfrac{4}{9}$ B. $\dfrac{9}{4}$ C. $\dfrac{5}{9}$ D. $\dfrac{13}{9}$