PAP Geometry

Name: Key

Date: _____ Period: _____

Chapter 14 – 15: **Probability Review**

1. A number cube from 1 to 6 and a coin are tossed. Find the sample space.

{1H, 1T, 2H, 2T, 3H, 3T, 4H, 4T, 5H, 5T, 6H, 6T}

2. In how many ways can a 10 question true-false test be answered if every question must be answered?

1024

3. How many 7-digit telephone numbers can be created if the first digit must be 8, the second must be 5, and the third must be 2 or 3? Digits can be repeated more than once.

20,000

4. In how many ways can 4 of 7 different kinds of trees be planted along a road if you only have one of each type of tree?

840

5. A letter is selected at random from those in the word TRIANGLE. Find the probability that it is a vowel.

$\frac{3}{8}$ or 37.5%

6. Three coins are tossed. Find the probability that exactly 2 land heads up.

$\frac{1}{8}$ or 12.5%

7. A single marble is drawn from a bag containing 3 red, 5 white, and 2 blue marbles.
Find the probability of each event.

   a. A red or blue marble is drawn.

   $\frac{5}{10}$

   b. A blue or white marble is drawn.

   $\frac{7}{10}$

   c. A red, white, or blue marble is drawn.

   $\frac{10}{10}$

8. There are 13 red, 12 blue, and 13 yellow crayons in a box. Jeff randomly selects one, returns it to the box, and then randomly selects another.
Find the probability of each event.

   a. The first crayon selected is blue and the second is yellow.

   10.8 %

   b. Both crayons selected are red.

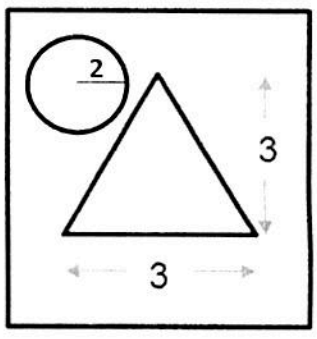
   11.7 %

   c. He draws three blues without replacing each crayon.

   2.6 %

9. What is the probability that a randomly selected point is in the shaded region?

$\frac{30 - \frac{9}{2} - 4\pi}{30}$ 43.1 %



10. Suppose you've totally forgotten your locker combination. There are 3 numbers in the combination and you're sure each number is different. The numbers on the lock range from 0 to 35. How many attempts could it take to get it right?

42,840

11. 100 people at a mall were asked what flavor of ice cream they prefer.

	Vanilla	Chocolate	Strawberry	Other	Total
Men	12	16	8	12	48
Women	10	18	12	12	52
Total	22	34	20	24	100

A person is selected at random from the sample. Find the probability that:

a. A person preferred vanilla.

$\frac{22}{100} \rightarrow \frac{11}{50}$

b. A person is female and preferred chocolate.

$\frac{18}{100} \rightarrow \frac{9}{50}$

c. A person is male given that they prefer any flavor except strawberry.

$\frac{40}{80} \rightarrow \frac{1}{2}$

12. Based on previous basketball games, the probability that Ryan will be chosen to play this weekend is 75%, that Brian will be chosen is 60%, and that Henry will be chosen is 50%.
Find the probability that:

a. Ryan and Henry will be selected but Brian will not.

$P(R) \times P(H) \times P(\text{not } B) = 15\%$

$.75 \times .5 \times .4$

b. At least one of the three is selected.

$P(\text{at least 1}) = 1 - P(\text{no one is selected})$

$1 - (.25 \times .5 \times .4)$

$1 - .05$

95 %