Algebra 2 Name _____

Practice 10.1 – 10.3 Hour _____

1. A code is one digit followed by 1 letter. The digit 0 and the letter O are not allowed. How many codes are possible?

$9 \cdot 25 = 225$

2. Nate is on a 7-day vacation. He wants to spend one day jet-skiing and one day golfing. How many ways can Nate schedule the 2 activities?

$7 \cdot 6 = 42$

3. A teacher wants to send 4 students to the library from a class of 34. How many possible ways can this be done?

$_{34}C_4 = 46376$

4. How many ways can a manager and an assistant be named from a task force of 9 people?

$_9C_2 = 36$

5. A hiker at the entrance of a park can take 4 trails to the lake, and then 3 trails from the lake to the cabins. How many different routes are possible from the park entrance to the cabins by way of the lake?

$4 \cdot 3 = 12$

6. A password is 4 letters followed by 1 digit. If uppercase letters (A) and lower case letters (a) can be used and are considered different, how many passwords are possible?

$52 \cdot 52 \cdot 52 \cdot 52 \cdot 10 = 73,116,160$

7. An art gallery has 9 photographs from an artist and wants to display 4 of them from left to right a long a wall. In how many ways can the gallery select and display 4 photographs?

$9 \cdot 8 \cdot 7 \cdot 6 = 3024$

8. A 5-card hand is dealt from a standard 52 card deck. How many ways are there to get at least 3 jacks?

$_4C_3 \cdot {}_{48}C_2$

9. A 5-card hand is dealt from a standard 52 card deck. How many ways are there to get at most 1 heart?

10. The table shows the results of a spinner experiment.

Number	Occurrences
1	6
2	11
3	19
4	14

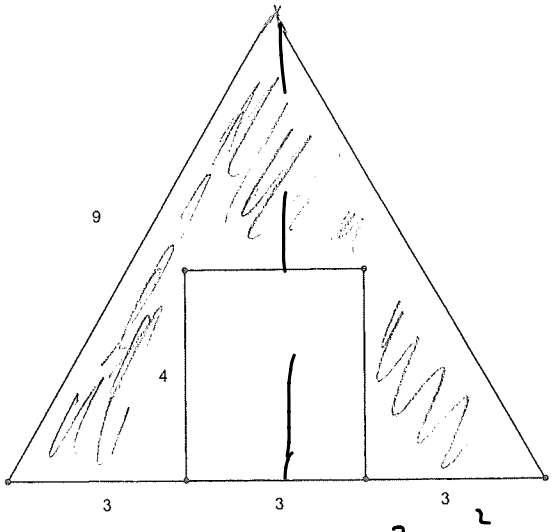
a) Find the experimental probability of spinning a 4?

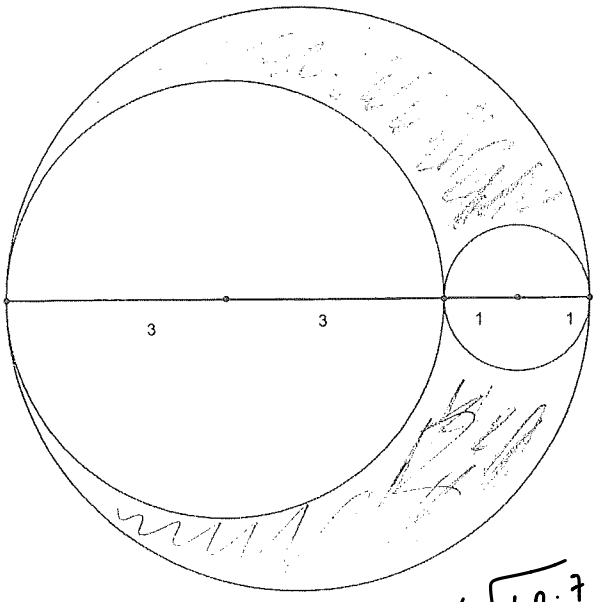
$\frac{14}{50}$

b) Find the experimental probability of spinning a number greater than 2?

$\frac{33}{50}$

11. Find the probability of being inside the shaded region, given that the target is hit.





$4.5^2 + x^2 = 9^2$ $\quad 20.25 + x^2 = 81$ $\quad .657$ $\quad \frac{h}{2}$ $\quad 4.5(\sqrt{60.7}$

.6566 + 65.77% $\quad \frac{17}{} =$ $\quad$ (3/8)

12. A coach randomly selects 3 swimmers from a team of 8 to swim in a heat. What is the probability that the 3 strongest swimmers are selected?

(1/56)

13. There are 3 green marbles, 7 red marbles, and 5 white marbles in a bag. Find the probability:

a) that the marble chosen is white. $\quad \frac{1}{3}$

b) that the marble is red or white. $\quad \frac{12}{15}$

14. A quarter, a dime, and a nickel are flipped. Find the probability : (Might want to draw a sample space.)

a) that the quarter is a heads.

1/2

b) that the dime and the nickel show heads.

1/4

c) that one coin shows heads.

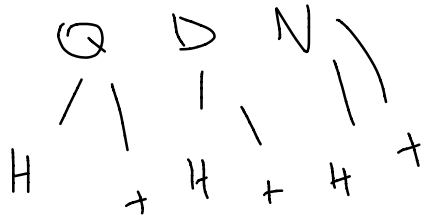
3/8

d) that all 3 coins land the same way.

2/8

15. A clerk has 4 different letters that need to go in 4 different envelopes. What is the probability that all 4 letters are placed in the correct envelopes?

1/24



$4C_1$