Test #2- Unit II Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AMDM

***Answer each question completely and show all work to receive full credit.***

**At the Gwinnett County fair, one of the games that the fair goers could play involves throwing a ball. The rules of the game are as follows**

 **- You get 4 balls to throw and you must throw it into the strike zone to count.**

 **- If you throw all four strikes, you get a large stuffed animal.**

 **- If you throw three strikes, you get a medium prize.**

 **- If you throw 1-2 strikes, you get a rubber snake.**

 **- If you throw 0 strikes, you go home empty-handed.**

1. What are the possible outcomes that you could expect to have? Make a tree diagram to show your different outcomes. (Separate sheet of paper)

2. What is the probability of throwing the following?

 A. P(4) B. P(4) C. P(3)

3. If 250 people play the game once, how many of each would be given away?

 A. Large stuffed animal B. Medium Prize C. Rubber snake

**Jimbo gets 20$ a week for his allowance. He wants to try to up his allowance so he decides he will shoot baskets to improve his game and his allowance. He suggests to his parents that:**

* **If he misses the first basket, he only gets $15**
* **If he makes the first basket, he gets 20$ and a chance to make a second shoot for an additional 10$.**

**Jimbo is a 55% shooter (he makes a basket 55% of the time)**

4. How many times a year do you expect Jimbo to get

 10$-\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20$-\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 25$-\_\_\_\_\_\_\_\_\_\_\_\_\_

5. How much allowance will he receive in a year? (Show your work)

**A local trade union consists of plumbers and electricians. Classified according to rank:**

 Apprentice Journeyman Master

 ------------------------------------

 Plumbers 25 | 20 | 30

 ------------------------------------

 Electricians 15 | 40 | 20

 -------------------------------------

6. A member of the union is selected at random. Given that the person selected is a plumber, the probability that he is a journeyman is:

 a. 1/2 b. 1/3 c. 4/15 d. 2/15

 **Below is a table that describes the age (in years) and the sex of students at Whatsamata University. A single student is to be selected to win an award.**

 Age 14-17 18-24 25-34 ≥35

 Male 1 30 12 4

 Female 1 30 13 9

1. What is the probability that the selected student is a male?
2. What is the probability that the selected student is female between the ages of 18-24?
3. What is the probability that the selected student is male or between the ages of 25-34?
4. 9. What is the probability of choosing the letter b from the word probability?