**Day 9 – Domain, Range, & Parameters Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Practice Assignment Block: \_\_\_\_\_\_**

1. An online company lets you download songs for $0.99 each after you have paid a $5 membership fee. Which domain would be the most appropriate to calculate the cost to download songs.

A. Rational numbers greater than 0 C. Integers less than or equal to 0

B. Whole numbers greater than or equal to 0 D. Real numbers greater than or equal to 0

2. What would be an appropriate range for the cost to download songs?

A. Rational numbers greater than 0 C. Integers less than or equal to 0

B. Whole numbers greater than or equal to 1 D. Whole numbers less than or equal to 1

3. Officials in a town use a function C, to analyze traffic patterns. C(n) represents the rate of traffic through an intersection where n is the number of observed vehicles in a specified time interval. What would be the most appropriate domain for the function?

A. Integers C. Whole Numbers

B. Rational Numbers D. Real numbers

4. Describe the transformations (parameters) of the following transformations.

a. y = x 🡪 y = x + 8 b. y = x2 🡪 y = -(x + 6)2 c. y = 2x 🡪 y = 3(2)x – 4

d. y = x2 🡪 y = ¼(x + 3)2 – 5 e. y = x 🡪 y = 2x – 3 f. y = 3x 🡪 y = -3x-5

5. Discuss the parameters of the following scenarios:

a. Mary is paid an hourly rate, but earned a bonus for the week. This scenario is modeled by y = 8x + 100.

b. Tyler had a nest of bees growing in a tree in his backyard. The population of the bees starting growing rapidly. This scenario is modeled by y = 10(3)x.

6. All tickets for a concert are the same price. The ticket agency adds a fixed fee to every order. A person who orders 5 tickets pays $93. A person who orders 3 tickets pays $57.

A. Write an equation relating the total cost to the number of tickets purchased.

B. Discuss what the slope and y-intercept mean in terms of the problem scenario.

C. How much do 4 tickets cost?

7. A taxi charges a pick up fee plus a charge per mile. Maria paid $14.00 for a 5 mile ride. Tony paid $17.75 for an 8 mile ride.

A. Write an equation relating the number of miles charged to the total cost of the taxi.

B. Discuss what the slope and y-intercept mean in terms of the problem scenario.

C. How much will it cost to ride 18 miles?