

## SEMESTER REVIEW: Linear Functions A

Name: \_\_\_\_\_

Period: \_\_\_\_\_

**Directions:** Find the linear function in slope-intercept form. Then using the function to answer the 2 questions.  
**Show all work.**

1. Jerry works at a local electronics store. He gets a monthly salary and a 10% commission. One month he earned \$2,800 when he sold \$23,000 of electronics. What is the function for Jerry's earnings?

How much would he earn if he sold \$30,000?

How much would he have to sell to earn \$4,000?

2. A bath tub is full of water. The drain is opened and the water drains at a rate of 2 gallons per minute. After 8 minutes, there is 40 gallons in the bathtub. What is the function for the amount of water in the bath tub?

How much water was there in the bath tub after 15 minutes?

How long would it take for the bath tub to be empty?

3. Jake works as a plumber, charging \$50 per hour plus a flat rate of showing up. One job, he earned \$375 for working 6 hours. What is the function of Jake's earnings?

How much would Jake earned if he worked for 2.5 hours?

What is Jake's flat rate?

4. Yolanda rented a car for a day from a company that charges a flat rate every day and \$0.15 a mile. For the day she rented it she drove 264 miles, paying \$69.60. What is the function for the cost of Yolanda's car rental?

How much would it cost Yolanda if she drove 340 miles?

How many miles did she drive if the cost was \$93.75?

5. The cost of a taxi is the base rate plus \$0.50 a mile. After the taxi has driven 10 miles is the cost \$12. What is the function for the cost of riding in the taxi?

How much would a taxi cost if it drove 20 miles?

What is the base rate?

6. Mark went bowling and bowled 3 games. The cost of the 3 games and shoe rental was \$19. If he bowled one game, with shoe rental, it would have cost him \$9. What is the function for the cost of shoe rental and bowling?

How much is shoe rental?

How much would it cost him if he bowled 6 games?

7. Peter works a local electronics store, making a flat weekly wage plus a 10% commission. Last week, he sold \$5,400 in merchandise and earned \$790. What is the function for Peter's earnings?

How much would Peter earn if he sold \$6,500 in one week?

What is Peter's flat weekly wage?

8. At local drive-in movie theater, they charge a flat rate for each car and \$3 for each person. Linda and her 4 friends went to the drive-in and paid \$14. What is the function for the cost of entering the drive-in?

How many people were in a car if they paid \$8?

What is the cost for a car to enter the drive-in?