

FLUENCY PRACTICE: Applications of Finding Linear Functions

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 commission. One month he earned \$2,100, when he sold \$8,500 of electronics. The next month he sold \$11,000 and earned \$2,600. What is the function for Jerry's earnings?

How much would he earn if he sold \$10,000?

How much would he have to sell to earn \$2,500?

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 \$25 every half hour of labor and \$60 a flat fee. What is the function of Jake's earnings?

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

How long did Jake work if he got paid \$172.50 for a job?

4. The number of dollars per month it costs you to own a car is a function of the number of kilometers per month you drive it. Based on information in an issue of Time magazine, the cost of a certain car is \$165 for 600 km and \$330 for 1,500 km. What is the function for the cost of owning this certain car?

How much would it cost if you drove 1,200 km?

How far would you have driven if the costs was \$420?

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?