

SEMESTER REVIEW: Linear Functions B

Name: _____

Period: _____

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

1. The cost of a taxi is the base rate plus mileage. Cindy took a taxi 10 miles and paid \$23.50. Later, Cindy took another taxi and paid \$51.50 going 24 miles. What is the function of the cost for Cindy taking taxis?

How much would it cost Cindy if her ride in a taxi was 15 miles?

For another taxi ride, Cindy paid \$19.50. How far was the taxi ride?

2. Henry and Steve were in a fishing tournament. For each fish caught, points are added to each person's score. Points are scored for catching a fish and more points are added based on the fish's weight. Henry caught a 7.4 pound fish and received 178 points. Steve caught a fish that weighed 6.5 pounds and he got 160 points. What is the function for scoring points in the fishing tournament?

Steve caught a fish that weighed 4.7 pounds. How many points did he get?

Henry needs 202 to take the lead in the fishing tournament. If he catches 1 more fish, what is the least weight the fish can have for Henry to win the tournament?

3. Sending a package by Postal Express Company costs a flat rate and by weight. Yesterday Kyle sent a package that weighed 12 pounds and the cost was \$21.50. Today Victoria sent a package that weighed 8 pounds and the cost was \$15.50. What is the function for the cost of shipping packages by Postal Express Company?

How much would it cost to send a 16 pound package?

Nina spent \$20 to send a package. How much did it weigh?

4. Monica and Ginger went to a local amusement park with their friends. They had to pay a fee to get into the amusement park and another fee for every ride at the amusement park. Monica spent \$28 and rode 6 rides. Ginger rode 9 rides and spent \$39. What is the function for the cost of going to the amusement park?

Gentry, one of their friends, spent \$22. How many rides did she ride?

What is the fee to get into the amusement park?

5. Laura works at a local electronics store. She gets a monthly salary and a commission. One month she earned \$3,000, when she sold \$12,000 of electronics. The next month she sold \$16,000 and earned \$3,800. What is the function for Laura's earnings?

One month last year, she made \$5,100. How much did she sell to earn it?

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

6. A large tank filled with water is being drained. After 8 minutes, 1,840 gallons left in the tank. There was 1,400 gallons after 30 minutes. What is the function for the amount of water in the large tank?

How much water was there in the large tank after 50 minutes?

How much water can the large tank hold?

7. Nick works as an electrician, charging a flat rate to show up and an hourly wage. One day he worked at one job for 6 hours and made \$510. The next day at another job, he made \$360 working 4 hours. What is the function of Nick's earnings?

How much would Nick earn if he worked for 8 hours for one job?

How long did Nick work if he got paid \$622.50 for a job?

8. Olivia rented a car at a flat daily rate and mileage. After driving for 250 miles, she calculated that she would pay \$40. At the end of the day, she drove 450 miles and had to pay \$60. What is the function for Olivia's cost of renting the car?

How much would it cost Olivia if she drove 600 miles?

How far would Olivia have driven if the cost of renting the car was \$45?