NAME_____**DATE**_____**PER.**_____

INDEPENDENT AND DEPENDENT

Tim uses the function g = 0.05m to find out how much money he needs for gasoline g based on the miles he travels m.

1. Which quantity in this relationship is the independent quantity? _____

2. Which quantity in this relationship is the dependent quantity? _____

_____3. Which of the following statements is true?

A. The number of miles Tim travels depends on how much money he needs for gasoline.

B. The number of miles Tim travels depends on the price of gasoline.

C. The amount of money Tim needs for gasoline depends on the number of miles he travels.

D. The price of gasoline depends on the number of miles Tim travels.

4. Tim has a budget of $50 to spend on gas this week. What domain and range are reasonable for this situation?

D: _____ R:_____

Rose's monthly phone allowance is $75. She can calculate her phone bill using the equation b = 0.1m + 12, where m represents minutes used and b represents the total bill.

5. Which quantity in this relationship is the independent quantity? _____

6. Which quantity in this relationship is the dependent quantity? _____

_____7. Which of the following statements is true?

A. The dependent variable b is 12 more than 0.1 times the independent variable, m.

B. The dependent variable m is 12 more than 0.1 times the independent variable, b.

C. The independent variable b is 12 more than 0.1 times the dependent variable, m.

D. The independent variable m is 12 more than 0.1 times the dependent variable, b.

8. What domain and range are reasonable for this situation?

D: _____ R:_____

Mrs. Barrett is planning to place a fence around her vegetable garden. The fencing cost $1.85 per yard and the delivery fee is $65.50.

9. Write the equation that can be used to find the total cost, *c*, of *y* yards of fencing._____

10. Which quantity in this relationship is the independent quantity? _____

11. Which quantity in this relationship is the dependent quantity? _____

_____12. Which of the following statements is true about the above situation?

A. The value of *y* is dependent on *c*.

B. The value of *c* is dependent on *y*.

C. The value of *c* is constant in the relationship to *y*.

D. The value of *y* is constant in the relationship to *c*.

13. Mrs. Barrett estimates that she needs between 50 to 60 yards of fencing to enclose her garden. What is a reasonable range for this situation?

_____14. Holly owns a farm market. The amount a customer pays for green peppers depends on the number of peppers purchased. Holly sells 3 peppers for $1.75. What is the independent variable?

A. Price per green pepper

B. Number of green peppers

C. Total Price

D. Number of customers

_____15. A home store is having a 10%-off sale on all in-stock bathroom floor tile. Which statement best represents the functional relationship between the sale of the tile and the original price?

A. The sale price and the original price are independent of each other.

B. The original price is dependent on the sale price.

C. The sale price is dependent on the original price.

D. The relationship cannot be determined.

Solve each of the following.

16. $4 – 2(x – 7) = 10$

17. $3(x – 4) – 7x = 20$