

Name: _____

Notes

Algebra Section 1.3

Pages 15-20



Date: _____

Goals: "I will translate verbal phrases into expressions"

"I will find a unit rate given two quantities"



Vocabulary:

Rate: A _____ that compare two _____ measured in different _____.

Unit Rate: The amount for _____. The denominator is _____. Use the word _____.

Writing Expressions

*Remember that an expression consists of _____ and _____ and does NOT have an _____.

Key Words

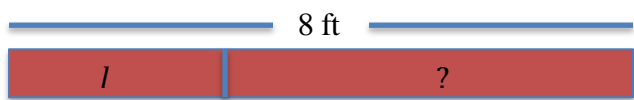
Addition	Subtraction
Multiplication	Division

Try These: Explain what is happening to 'Mr. x '.

- a) The **sum** of a number n and 5 _____
- b) 4 **less than** the quantity 6 times a number n _____
- c) 3 **times** the **sum** of 7 and a number y _____
- d) The difference of 22 and the number m _____
- e) The quotient when the 10 plus a number x is divided by 2 _____

Write an expression to represent each situation.

- a) A piece of ribbon l feet long is cut from a ribbon 8 feet long. Write an expression for the length, in feet, of the remaining piece. (Draw a picture to help)



b) You work with 5 other people at an ice cream stand. All the workers put their tips in a jar and share their tips equally at the end of the day. Write an expression to represent the total amount of money each worker will receive in tips at the end of the day. State what the variable stands for.

How much did they make in tips? _____

How many people are going to share the tips? _____

What operation should you use if they are going to split their tips? _____

Write the expression. _____

What does your variable stand for? The amount



c) You and 4 friends meet to have dinner at a restaurant. Everyone decides to order the nightly special. Write an expression to represent the total cost of the meal. State what the variable stands for.

How much does the nightly special cost? _____

How many people are ordering it? _____

Which operations should you use to find the total cost if everyone spent the same amount?

Write the expression. _____

What does your variable stand for? The cost _____

d) 9 gallons of gas costs \$29.70. Find the unit rate/price.

e) A jogger can run 4 miles in 38 minutes. Find the unit rate. (minutes per mile)

Challenge:

Multi-Step Problems

a) Your basic monthly charge for cell phone service is \$30.

You pay a fee for each extra minute you use.

One month you paid \$3.75 for 15 extra minutes.

Find your total bill if you use 22 extra minutes

Step 1: CALCULATE THE UNIT RATE (cost per additional minute)

$$\frac{\text{cost}}{\text{minutes}} = \frac{\quad}{\quad} = \frac{?}{1}$$

Step 2: How much will it cost for 22 minutes?

Step 3: How much will the total bill be?

b) You have a membership at a local ski club.

The membership costs you \$40 per month.

You must pay a fee for each lift ticket. It costs \$13.50 for 3 lift tickets.

You bought 7 lift tickets this month.

Step 1: Calculate the unit rate. How much does it cost for 1 lift ticket?

Step 2: How much will 7 lift tickets cost?

Step 3: What is the total cost this month?