Name _____ Class _____ Date _____

Reteaching 1-1

Using Variables

OBJECTIVE: To model relationships with variables and equations

MATERIALS: None

You often hear word phrases such as *half as much* or *three times as deep*. These phrases describe mathematical relationships. You can translate word phrases like these into mathematical relationships called algebraic *expressions*.

Example

Translate the following word expressions into algebraic expressions.

the sum of x and 15

$x + 15$

Remember that "sum" means to add.

seven times x

$7x$

Remember that "times" mean to multiply.

Example

Translate the following word sentence into an algebraic equation.

The weight of the truck is two times the weight of the car.

$$\underbrace{\text{The weight of the truck}}_{t} \overset{=}{\text{is}} \underbrace{\text{two times}}_{= 2 \,\bullet} \underbrace{\text{the weight of the car.}}_{c}$$

$$t = 2c$$

← **Write an equal sign under the word *is*. Whatever is written to the left of *is* belongs on the left side of the =. Whatever is written to the right of *is* belongs on the right side of the =.**

← **Represent the unknown amounts with variables.**

← **The translation is complete. Check to make sure you have translated all parts of the equation.**

Exercises

Translate the following word expressions and sentences into algebraic expressions or equations.

1. a number increased by 5
2. 8 subtracted from a number
3. a number divided by 9
4. 3 less than five times a number
5. A number multiplied by 12 is 84.
6. 7 less than n is 22.
7. 8 times a number x is 72.
8. A number divided by 3 is 18.

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