

Chapter 8 Vocabulary

Equation

- Two math expressions that are equal.

Example 1: $3x = -2$

Example 2: $\frac{y}{2} = 1$

Variable

- A letter that represents an unknown value.

Example: In the equation: $1.2d + 3.5 = -1.6$, the **variable** is the letter d.

Constant

- A known value.

Example: In the equation, $1.2d + 3.5 = -1.6$, the **constants** are the numbers 3.5 and (-1.6).

Coefficient

- A number that multiplies an expression.

Example: In the equation, $1.2d + 3.5 = -1.6$, the coefficient is the number 1.2.

Opposite Operations

- A math operation that will undo another. They are also called **inverse operations**.

Example 1: Addition and subtraction are opposite operations.

Example 2: Multiplication and division are opposite operations.

Distributive Property

- Expand a multiplication expression by multiplying the coefficient by **all the terms** inside the bracket.

Example: $3x(2x - 4) = [(3x)(2x)] + [(3x)(-4)] = 6x^2 - 12x$

Fraction bar

- The line between the numerator and denominator of a fraction. It represents division.

Example: $\frac{2}{3}a$ is the same as $\frac{2a}{3}$ which is the same as $2a \div 3$

Changing sentences to equations:

Examples...

A number (x) increased by nine ($+9$) is (=) fifteen.	$y + 9 = 15$
Twice a number ($2x$) is (=) eighteen.	$2n = 18$
Four less than a number ($x - 4$) is (=) twenty.	$x - 4 = 20$
A number divided by six ($x \div 6$) is (=) eight.	$\frac{k}{6} = 8$
Twice a number ($2x$), decreased by twenty-nine (-29), is (=) seven.	$2t - 29 = 7$
Thirty-two is (=) twice a number ($2x$) increased by eight ($+8$).	$32 = 2a + 8$
The quotient (\div) of fifty (50) and five more than a number ($x + 5$) is (=) ten.	$\frac{50}{n + 5} = 10$
Twelve is (=) sixteen less (-16) than four times a number ($4x$).	$12 = 4x - 16$
Eleni is x years old. In thirteen years ($+13$) she will be (=) twenty-four years old.	$x + 13 = 24$
Suzanne made a withdrawal of d dollars ($-d$) from her savings account. Her old balance was \$350, and her new balance is \$280.	$350 - d = 280$
A large pizza pie with 15 slices is shared among (\div) p students so that each student's share is (=) 3 slices.	$\frac{15}{p} = 3$