Interpreting Expressions

Vocabulary

Learning Questions

- What am I learning today?
  - The vocabulary needed to describe mathematical expressions
- How will I show I learned it?
  - Identify the pieces of a trinomial expression

Vocabulary

- Insert the following math terms into the "**Vocabulary**" section of your INB. (Starts at page 3)
- **Be sure to include the examples.**

Algebraic Expression

- A mathematical statement with variables, numbers, addition, subtraction, multiplication, division, parenthesis, square roots, exponents…

- Examples:

$$\frac{x-2}{3(x+2)}$$

$$-5b+7c-d$$

$$\sqrt{5xy}$$

Variable

- Symbols or letters used to represent an unknown

- Examples: x

θ

β

☺

Term

- Items that are being added, subtracted, or divided.

- Examples:

$$5a^2 - 2xy + 3$$

3 terms

$$\frac{P - 2x}{a^2 + b}$$

4 terms

Like Terms

- A term with the same variable raised to the same power

- Examples:

$5x^2y$ and $8x^2y$

$-7y^2$ and $22y^2$

Coefficient

- The **number** in front of a variable. It can be **positive or negative**.

- Examples:

$123xy$	**123**
$6-9y^3z^2$	**-9**
x	**1**

Exponent

- The number up in the air next to a base
- The number of times you multiply something by itself

- Examples: 2^3 **3**

x^{12} **12**

$-3y^4+7$ **4**

Base

- What the **exponent** sits on. You cannot have a base without an exponent.
- The part that has been raised to a power

- Examples: 2^3 **2**

x^{12} **x**

$-3y^4+7$ **y**

Constant

- A number that has no variable
- It can be **positive or negative**

- Examples:

-42 **-42**

$3x + 5$ **5**

$5x^2 + 3y^4 - 8$ **-8**

Factors

- Items that are being **multiplied** together
- Can be numbers, variables, parenthesis
- Examples:

6 **1 and 6…. Or 2 and 3**

$9xy$ **9 and x and y**

$(x+2)(y-3)$ **(x + 2) and (y – 3)**

$3(z-9)$ **3 and (z – 9)**

INB - Page 10

Title

"Mathematical Operation Words"

ADDITION (+)

- Sum
- Plus
- Add
- More Than
- Increased

SUBTRACTION (-)

- Difference
- Minus
- Decreased
- Less Than (swaps the order)

DIVISION (÷)

- Quotient
- Half
- Divide by

MULTIPLICATION (•)

- Product
- Twice
- Double
- Triple

EXPONENTS (x^2)

- Square
- Cubed
- To the power of
- Raised to a power

SQUARE-ROOT (√)

- Square-Root
- Root of

GREATER THAN (EQUAL TO) (>/≥)

- Greater Than
- More Than
- No Less Than
- At Least

LESS THAN (EQUAL TO) (</≤)

- Less Than
- No More Than
- At Most

Practice

- Copy the following problems on the left page of your INB. Write the problem and then the answer.

Translate

The sum of a number and 10

$x + 10$

Translate

The product of 9 and x squared

$$9x^2$$

Translate

9 less than g to the fourth power

$$g^2 - 9$$

Translate

$8 + 3x$

Eight increased by three times x

Practice Worksheet

"Matching Expressions"

INB - Page 11

Title

"Interpreting an Expression"

Practice

On the left page across from "Interpreting an Expression", copy the following problems and try to answer the accompanying questions.

Practice 1

$$6x^3 - 4xy + 7x^2 - 12$$

How many terms are there?

Name the terms:

Name the factors:

Name the coefficients:

Name the constant:

Practice 2

$$3a^2b - 16abc + 8.5$$

How many terms are there?

Name the terms:

Name the factors:

Name the coefficients:

Name the constant:

Practice 3

You are buying 4 cokes at "d" dollars each. Tax is an additional $.58.

Write an expression for this situation.

How many terms are there?

Name the terms:

Name the factors:

Name the coefficients:

Name the constant:

HOMEWORK

WORKSHEET

Interpreting an Expression Intro Worksheet