

Geometry 9/15

Warm Up IXL
6th Grade
Z.9

0-4 Algebraic Expressions

I can use the order of operations to evaluate algebraic expressions

Mathematics requires “rules of the road;” without them we would all be getting different answers. It’s called Order of Operations.

Rules:

1. Calculate within the innermost grouping symbols, $()$, $[\]$, $\{ \}$, $| \ |$, and above or below fraction bars.
 2. Simplify all exponential expressions.
 3. Perform all multiplication and division, working from left to right.
 4. Perform all addition and subtraction, working from left to right.
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Grouping Symbols you may come across:

$$\begin{array}{cccccc} () & [] & \{ \} & | | & \frac{\#}{\#} \\ \sqrt{\quad} & & \sqrt[3]{\quad} & & \end{array}$$

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PEMDAS?

GEMDAS?

Until you have mastered this, I strongly recommend that you **NOT** bend the rules.

PEMDAS: Please Excuse My Dear Aunt Sally

1st: Parenthesis

2nd: Exponents

3rd: Multiplication/Division from left to right

4th: Addition/Subtraction from left to right

GEMDAS: Groups Enjoying Math Display Awkward Symptoms

1st: Grouping Symbols

2nd: Exponents

3rd: Multiplication/Division from left to right

4th: Addition/Subtraction from left to right

Extra Credit write your own acronym for PEMDAS
or GEMDAS

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Ex. 1 Evaluate each expression if:

$$k = -2, n = -4, \text{ and } p = 5$$

$$\begin{aligned} \frac{2k+n}{p-3} &= \frac{2 \cdot -2 * -4}{5-3} \\ &= \frac{2 \cdot -2 - 4}{5-3} = \frac{-4-4}{2} \\ &= \frac{-8}{2} = -4 \end{aligned}$$

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Ex. 2 Evaluate the expression if:

$$k = -2, n = -4, \text{ and } p = 5$$

$$-3(k^2 + 2n)$$

$$-3((-2)^2 + 2 \cdot -4)$$

$$-3(4 - 8)$$

$$-3(-4)$$

$$12$$

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Ex. 2 Evaluate if $a = -2$, $b = -4$, and $c = 3$

$$3|a - b| + 2|c - 5|$$

$$3|-2 - (-4)| + 2|3 - 5|$$

$$3|2| + 2|-2|$$

$$3 \cdot 2 + 2 \cdot 2$$

$$6 + 4 = 10$$

Ms. Brown
Alg 1
9/13/16
Pg P10 #1-12

I can use the order of operations to evaluate algebraic expressions

Hmwk
Pg P10
#1-12 all