



Flex

Order of Operations (Day 1)

Name: _____

Date: _____

Think about the Order of Operations and what it means.

- A. *Marty is starting to read a word whose ending is covered up: H U G. "Hug!" he says. But then he sees that there is one more letter in the word: it is H U G E.*

Explain why the ending of the word changes the sounds that come before it.

- B. Then explain how this quirk of reading English relates to applying the order of operations to mathematical expressions.



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Order of Operations (Day 2)

Name: _____

Date: _____

Think about the Order of Operations and what it means.

- A. Use optional parentheses, any two or more of the four operations (addition, subtraction, multiplication, and division), and any two or more of the digits 1, 2, 3, and 4 to write three different expressions that simplify to 10. (You may use the digits more than once.) For each expression, show how you apply the order of operations to simplify the expression.



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Order of Operations (Day 3)

Name: _____

Date: _____

Think about the Order of Operations and what it means.

A. Sammy is trying to simplify this expression:

$$5 + \frac{8+(2+6)^2}{4}$$

What should he do with the fraction bar? How does it fit within the mnemonic PEMDAS? Is it reasonable for Sammy to instead think of GEMDAS (Grouping, Exponents, Multiplication and Division, Addition and Subtraction)?



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Order of Operations (Day 5)

Name: _____

Date: _____

Think about the Order of Operations and what it means.

- A. You may have encountered *recursive* rules in math. For example, the number sequence 5, 9, 13, 17, 21..., can be defined as “the first term is 5; every subsequent term is the previous term, plus 4”.

How does the Order of Operations apply *recursively* to simplifying an expression such as $2 + 3(5 + (6 + \sqrt{3 + 3 \cdot 2}))$? Think about the mnemonic PEMDAS and how it tells you to simplify an expression.