

Name _____ Per _____

Mrs. Doolan /Math 6

2-8 Order of Operations



Objective: You've learned to work with and solve arithmetic problems using just one operation.

Now you'll learn to simplify problems using several operations.

To solve multi-operational problems, use the Order of Operations (called PEMDAS, GEMDAS, or GEMS) and track from left to right:

order of operations					
The order of operations is a rule that tells you the sequence to follow when you are performing operations in a mathematical expression.					
1.	2.	3.		4.	
parentheses	exponents	multiplication	division	addition	subtraction
P	E	M or D	A or S		
()	y^x	\times	\div	$+$	$-$
Do P , then E . Then do M or D , left to right. Lastly, do A or S , left to right.					



NOTE: The P stands for all grouping symbols: parenthesis, brackets, and braces) { [()] }



To solve:

- 1) **Underline the “most important” part of the problem, and solve just that part, writing it under the line**
- 2) **Rewrite the rest of the problem—working slowly helps you to not make mistakes!**
- 3) **Repeat until the problem is completed**

Example #1:



$$3 \times 5 + 6^2 = b$$

$$3 \times 5 + \underline{6^2} = b \quad \text{1. Clear exponent: } 6^2 = 36$$

$$\underline{3 \times 5} + 36 = b \quad \text{2. Multiply: } 3 \times 5 = 15$$

$$\underline{15 + 36} = b \quad \text{3. Add: } 15 + 36 = 51$$

$$\text{SOLVE: } b = 51$$



YOU TRY:

1. $(21 + 4) \div 5 = m$

2. $(15 - 3 \div 3 - 2) \div 2^2 = b$

SUPER CHALLENGE QUESTION:

3. $(5 \times 6 + 7 \times 3) \div [12^2 - 10^2 - (3 \times 9)]$