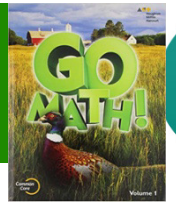
Go-Math Lesson 1-12



Go Math Lesson 1.12

Algebra – Grouping Symbols

Learning Target:

I can evaluate (solve) numerical expressions using parenthesis, brackets and braces.

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	×	÷	+	−

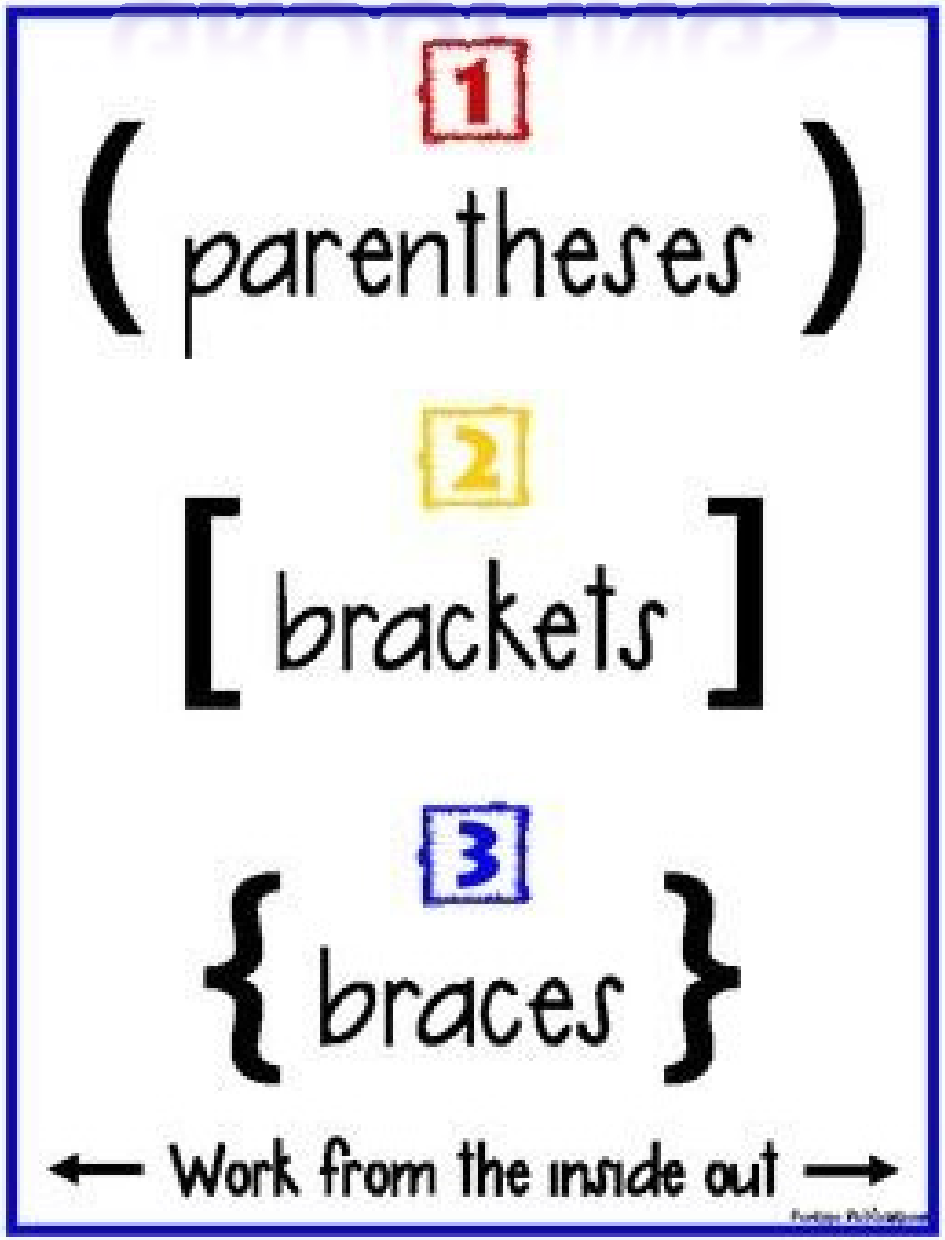
Do P, then E. Then do M or D, left to right. Lastly, do A or S, left to right.

1.	2.	3.		4.	
grouping	exponents	multiplication	division	addition	subtraction
G	E	M or	D	A or	S
( )	y^x	× ·	÷	+	−

Do G, then E. Then do M or D, left to right. Lastly, do A or S, left to right.

-VS-

"GROUPINGS"



{2 x [6 x (4 + 3)] } + 7

{2 x [6 x (4 + 3)] } + 7

Step 1: Add 4 + 3
Step 2: Multiply 6 x 7
Step 3: Multiply 2 x 42
Step 4: Add 84 + 7

Daily Math Do-Now

Guiding question:

*How many **key math words** can you recall for each operation?*

In math, there are many ways to say the same thing.

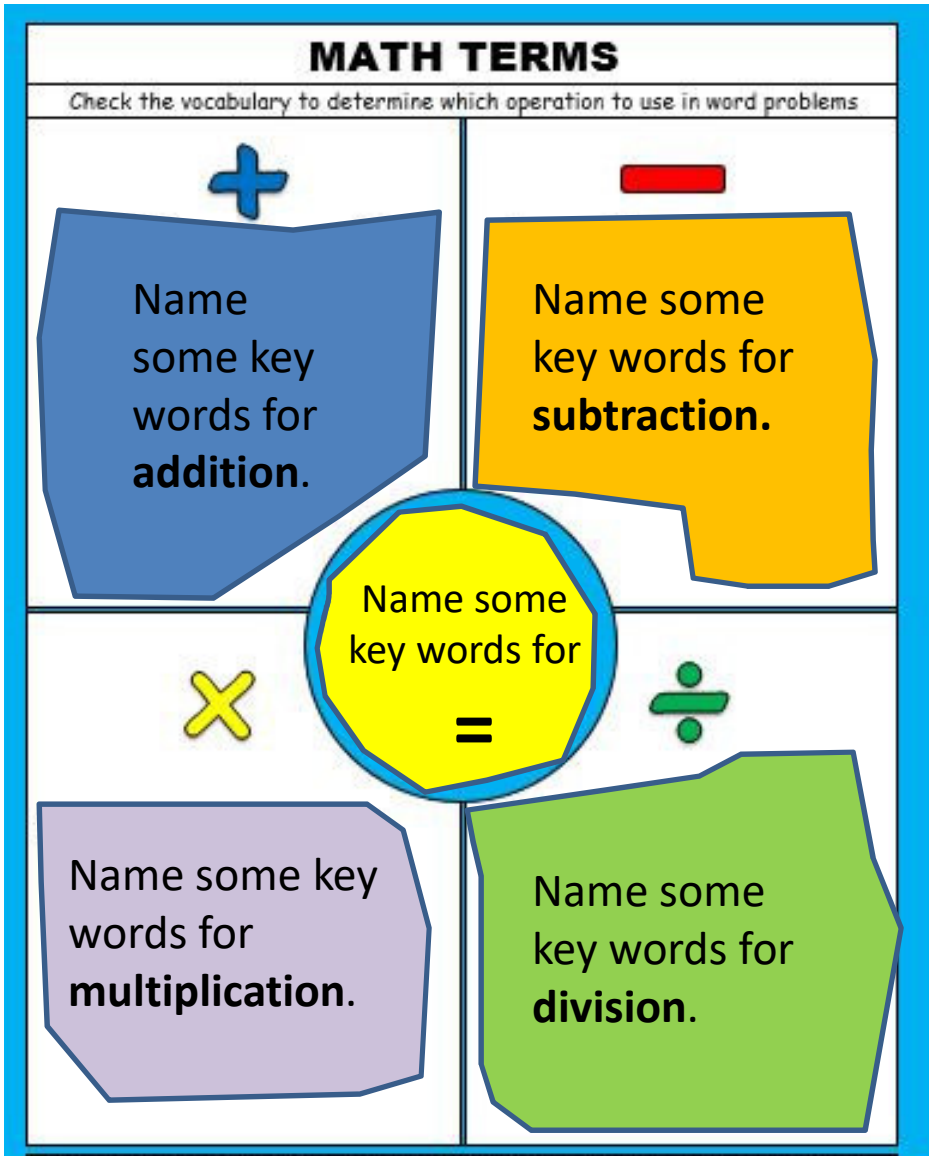
Practice:

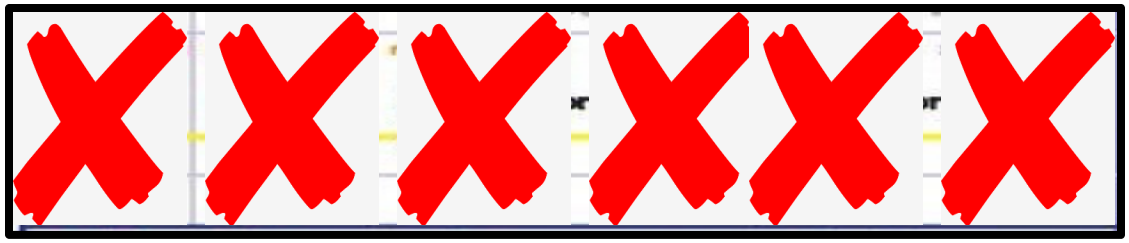
$$6\,(34 + 8)$$

"Six times the sum of 34 and 8"
"Six multiplied by the sum of 34 and 8"
"The product of 6 and the sum of 34 and 8"

$$21 \div (9 - 2)$$

"The quotient of 21 and the difference of 9 and 2"
"21 divided by 9 take away 2"





$$32 \div (5 + 3) =$$

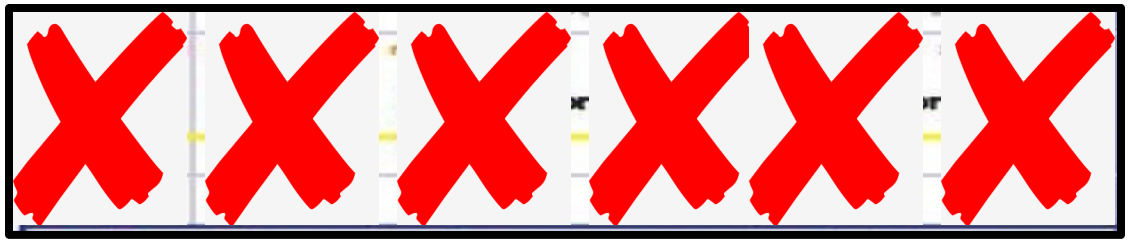
$$32 \div 8$$

$$4$$

Step 1: Write "PEMDAS" above the equation.

Step 2: Working left-to-right, go through each letter performing the function in that order.

Step 3: Rewrite the existing variable underneath until it is completely solved.



$$[43 - (7 + 24)] \times 2 =$$

$$[43 - 31] \times 2$$

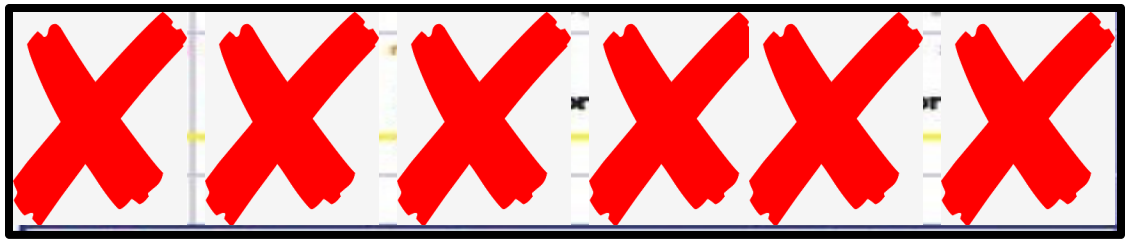
$$12 \times 2$$

$$24$$

Step 1: Write "PEMDAS" above the equation.

Step 2: Working left-to-right, go through each letter performing the function in that order.

Step 3: Rewrite the existing variable underneath until it is completely solved.



$$\{7 + [(22 - 4) \div 3]\} \times 5 =$$

$$\{7 + [18 \div 3]\} \times 5$$

$$\{7 + 6\} \times 5$$

$$13 \times 5$$

$$65$$

Step 1: Write "PEMDAS" above the equation.

Step 2: Working left-to-right, go through each letter performing the function in that order.

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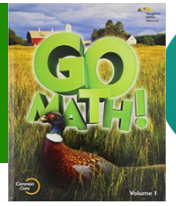

DISCUSS:

Jeremiah followed these steps to evaluate the expression
150 – (84 + 2) ÷ 2

84 + 2 = 86
150 – 86 = 64
64 ÷ 2 = 32

Joshua looks at Jeremiah's work and says he made a mistake. He says he should have divided before he subtracted.

Who is correct?

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71 – (11 + 3)
Value = 57

TRUE

40 + (18 – 8) ÷ 5
Value = 52

FALSE

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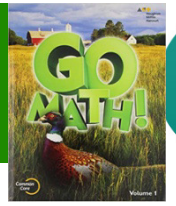

Your tasks:

1. Complete Google Classroom Lesson 1.12 Check-in
2. Complete **Think Central assignments**!
3. **Watch videos** posted on the website
4. Complete **IXL Skills** for the week

You have a lot to do – Don't waste time!