

p. 8-9 Order of Operations

Warm-Up:

Complete page 4 in notebook (Persevere)

p. 8-9 Order of Operations

Discuss with a partner...

WHAT IS THE ANSWER?

$$7 + 7 \div 7 + 7 \cdot 7 - 7$$

The image shows the expression $7 + 7 \div 7 + 7 \cdot 7 - 7$ with red annotations. A red '1' is above the first division sign, and a red '2' is above the multiplication sign. Red brackets are drawn under the $7 \div 7$ and $7 \cdot 7$ terms.

$$7 + 1 + 49 - 7$$

50

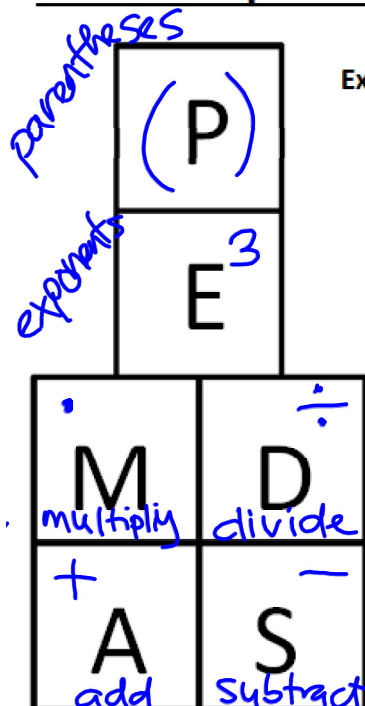
50
56

HW: *What questions do you have?*

He wanted to wake up oily.

Order of Operations

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Example:

$$17 - 5^2 \div (2 + 3) + 8 \cdot 2$$

$$\underline{17 - 5^2 \div 5 + 8 \cdot 2}$$

$$\underline{17 - 25 \div 5 + 8 \cdot 2}$$

$$\underline{17 - 5 + 16}$$

$$\underline{\quad 28}$$

- ALWAYS Multiply and Divide
left to right
- ALWAYS Add and Subtract
left to right
- Inside parenthesis
always follow Order of Operations.

*brackets
division bar*

Examples

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Simplify by using the Order of Operations

1. $(12 - 6) \cdot 3 - 2$

$6 \cdot 3 - 2$

$18 - 2$

16

2. $15/3 \cdot 5 - 4^2$

$15/3 \cdot 5 - 16$

$5 \cdot 5 - 16$

$25 - 16$

9

Examples

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Simplify by using the Order of Operations

3. $20 - [2(8 + 1)^2]$

$20 - [2(9)^2]$

$20 - [2 \cdot 81]$

$20 - 162$

-142

4. $10 + 4^2 \div 8 - 2 \cdot 3^2$

$10 + 16 \div 8 - 2 \cdot 9$

$10 + 2 - 18$

$12 - 18$

-6

Practice:

1) $\frac{15}{1+4} - 2$

2) $3 \cdot 1^3 - 2$

3) $(3-2) \cdot 4(5+4)$

4) $(3-1) \cdot \frac{18}{2+4}$

5) $(5+5 - (5-5)^3) \cdot 4$

6) $\frac{11+11-4}{2 \cdot 2 - 1}$