Warmup

Order from least to greatest:

$$\frac{4}{5}, \ 4.5 \times 10^{-2}, \ 45\%, \ 0.\overline{8}$$

$4.5 \times 10^{-2}, \ 45\%, \ \frac{4}{5}, \ 0.\overline{8}$

$-2\frac{4}{5} \ - \ \frac{2}{3}$

$-3\frac{7}{15}$

Order of Operations

What is order of operations?

Tells you which operations to perform first when you have a math sentence with more than one operation.

Example: 5 · 3 + 5

Which operation do you complete first?

The Correct Order

Step 1 Work inside the parentheses Pull

Step 2 Exponents Pull

Step 3 Multiplication/Division Pull (from left to right)

Step 4 Addition/Subtraction Pull from left to right
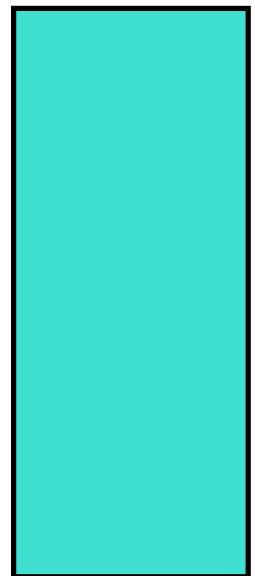
P
~~E~~
~~M~~
~~D~~
~~A~~
S

P
E
M/D
A/S

Example: $2(5-4)^2+3$

$(5-4)= 1$; Now we have $2(1)^2+3$

$(1)^2= 1$; Now we have $2(1)+3$

$2(1)= 2$; Now we have $2+3$

$2+3= 5$

Final Answer: 5

NOW YOU TRY.

1) $4(3-1)^2$

16

2) $8+2(6-2) \div 4$

$8+2(4) \div 4$

$8+ 8 \div 4$

$8+2$

10

3) $8 \cdot (9-7) \div 4+2$

$8 \cdot (2) \div 4+2$

$16 \div 4+2$

$4+2$

6

$36 \div (6 + 3) \times (3^3 + 17) \div 4$

$36 \div 9 \times (27 + 17) \div 4$

$4 \cdot (44) \div 4$

$176 \div 4$

44

$80 \div (2^3 \times 5) + 47 - 19$

$80 \div (8 \cdot 5) + 47 - 19$

$80 \div 40 + 47 - 19$

$2 + 47 - 19$

$49 - 19$

30

$2 \times (14 \div 2)^2 + 5 \times 12$

$2 \cdot (7)^2 + 5 \times 12$

$2 \cdot 49 + 5 \cdot 12$

$98 + 60$

158

$5 - \sqrt{25} \cdot -9 + 22$

$5 - 5 \cdot -9 + 22$

$5 + 45 + 22$

$50 + 22$

72

$$7 \cdot (4+3)^2 \div 7 \cdot (8-3) \div 2$$

$$7 \cdot (7)^2 \div 7(5) \div 2$$

$$7 \cdot 49 \div 7(5) \div 2$$

$$343 \div 7 \cdot 5 \div 2$$

$$49 \cdot 5 \div 2$$

$$245 \div 2$$

$$122.5$$