

### 3-Step Order of Operations - Guided Lesson Explanation

P	E	M	D	A	S
Parenthesis	Exponents	Multiply	Divide	Add	Subtract
1	2	3	4	5	6

We use the order of operations that PEMDAS (above) spells out.

#### Explanation#1

Step 1) We start with the parenthesis first. We have two sets:

a.  $4 + 8 \times 2$  and b.  $2 + 1$

a.  $4 + 8 \times 2$  We multiply first.

$4 + 16$  We add to complete that parenthesis.

$20$

b.  $2 + 1 = 3$  Simple addition.

Step 2) Restate problem as it is now:

$20 \div 3 = 6 \text{ r } 2$

#### Explanation#2

Step 1) We start with the parenthesis:

$32 - 2 = 30$

Step 2) Restate the problem:  $30 \times 6 \div 3$

Step 3)  $30 \times 6 \div 3$  Multiplication

$180 \div 3$

Step 4)  $180 \div 3 = 60$  Simple division is all that is left.



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### Explanation#3

Step 1) We start with the parenthesis first. We have two sets:

a.  $(12 + 18 \times 2)$  and b.  $(9 + 3)$

a.  $12 + 36$           Multiply first

48                      Add

b.  $9 + 3 = 12$       Add

Step 2) Restate the problem

$48 \div 12$

Step 3)  $48 \div 12 = 4$  Simple Division

