

 **Learning Objective:** Using order of operations to solve expressions.

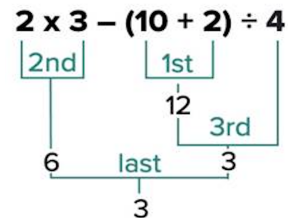
Order of Operations

BODMAS is an acronym and it stands for **B**racket, **O**rder, **M**ultiplication and **D**ivision, and **A**ddition and **S**ubtraction.

It explains the order of operations to be performed while solving an expression.

Note: The “O” in the BODMAS is also called “Order”, which refers to the numbers which involve powers, square roots, etc.

Evaluate the following using order of operations:



- Complete brackets first.
- Do multiplication and division next, working from left to right.
- Do addition and subtraction last, working from left to right

Write the appropriate numerical expression to represent each statement below.

Half of the difference between eight and two

Product of three and the sum of four and six

One third of the sum of twenty six and ten

Use the order of operations to solve the following expressions

$12 \div 2 + 3 \times 11 - 20$

$17 - 36 \div 6 + 5 \times 12$

$11 + 12 \times 5 - 11$

$4 + 8 - 14 \div 2$

$14 + 96 \div 8 \times 3 - 5$

$6 + 12 - 4 \times 4$



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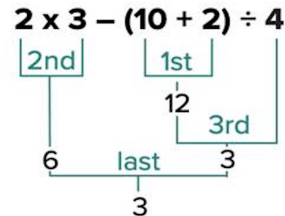
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Evaluate the following using order of operations:

$$2 \times 3 - (10 + 2) \div 4$$


- Complete brackets first.
- Do multiplication and division next, working from left to right.
- Do addition and subtraction last, working from left to right

Write the appropriate numerical expression to represent each statement below.

Half of the difference between eight and two

$$\begin{aligned} (8 - 2) \div 2 \\ = 6 \div 2 \\ = 3 \end{aligned}$$

Product of three and the sum of four and six

$$\begin{aligned} 3 \times (4 + 6) \\ = 3 \times 10 \\ = 30 \end{aligned}$$

One third of the sum of twenty six and ten

$$\begin{aligned} (26 + 10) \div 3 \\ = 36 \div 3 \\ = 12 \end{aligned}$$

Use the order of operations to solve the following expressions

$$12 \div 2 + 3 \times 11 - 20$$

$$\begin{aligned} 12 \div 2 + 3 \times 11 - 20 \\ 12 \div 2 + 3 \times 11 - 20 \\ = 6 + 33 - 20 \\ = 19 \end{aligned}$$

$$17 - 36 \div 6 + 5 \times 12$$

$$\begin{aligned} 17 - 36 \div 6 + 5 \times 12 \\ = 17 - 36 \div 6 + 5 \times 12 \\ = 17 - 6 + 60 \\ = 71 \end{aligned}$$

$$11 + 12 \times 5 - 11$$

$$\begin{aligned} 11 + 12 \times 5 - 11 \\ = 11 + 12 \times 5 - 11 \\ = 11 + 60 - 11 \\ = 60 \end{aligned}$$

$$4 + 8 - 14 \div 2$$

$$\begin{aligned} 4 + 8 - 14 \div 2 \\ = 4 + 8 - 14 \div 2 \\ = 4 + 8 - 7 \\ = 5 \end{aligned}$$

$$14 + 96 \div 8 \times 3 - 5$$

$$\begin{aligned} 14 + 96 \div 8 \times 3 - 5 \\ = 14 + 96 \div 8 \times 3 - 5 \\ = 14 + 4 - 5 \\ = 13 \end{aligned}$$

$$6 + 12 - 4 \times 4$$

$$\begin{aligned} 6 + 12 - 4 \times 4 \\ = 6 + 12 - 4 \times 4 \\ = 6 + 12 - 16 \\ = 2 \end{aligned}$$