

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

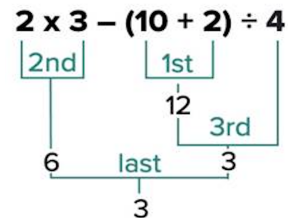
### Order of Operations

**BODMAS** is an acronym and it stands for **B**racket, **O**rder, **M**ultiplication and **D**ivision, **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 twenty and four

Product of five and the sum of ten and three

One fifth of the sum of twenty two and three

Use the order of operations to solve the following expressions

$14 \div 2 + 3 \times 15 - 12$

$13 - 28 \div 7 + 4 \times 9$

$17 + 8 \times 7 - 13$

$6 + 17 - 24 \div 4$

$21 + 84 \div 7 \times 2 - 9$

$52 + 19 - 5 \times 7$



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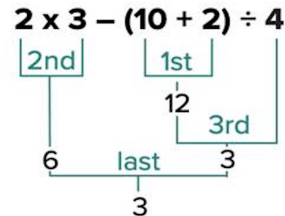
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**BODMAS** is an acronym and it stands for **B**racket, **O**rder, **M**ultiplication and **D**ivision, and **A**ddition and **S**ubtraction.

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**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:

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


- 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 twenty and four

$$\begin{aligned} (20 - 4) \div 2 \\ = 16 \div 2 \\ = 8 \end{aligned}$$

Product of five and the sum of ten and three

$$\begin{aligned} 5 \times (10 + 3) \\ = 5 \times 13 \\ = 65 \end{aligned}$$

One fifth of the sum of twenty two and three

$$\begin{aligned} (22 + 3) \div 5 \\ = 25 \div 5 \\ = 5 \end{aligned}$$

Use the order of operations to solve the following expressions

$$14 \div 2 + 3 \times 15 - 12$$

$$\begin{aligned} 14 \div 2 + 3 \times 15 - 12 \\ 14 \div 2 + 3 \times 15 - 12 \\ = 7 + 45 - 12 \\ = 40 \end{aligned}$$

$$13 - 28 \div 7 + 4 \times 9$$

$$\begin{aligned} 13 - 28 \div 7 + 4 \times 9 \\ = 13 - 28 \div 7 + 4 \times 9 \\ = 13 - 4 + 36 \\ = 71 \end{aligned}$$

$$17 + 8 \times 7 - 13$$

$$\begin{aligned} 17 + 8 \times 7 - 13 \\ = 17 + 8 \times 7 - 13 \\ = 17 + 56 - 13 \\ = 60 \end{aligned}$$

$$6 + 17 - 24 \div 4$$

$$\begin{aligned} 6 + 17 - 24 \div 4 \\ = 6 + 17 - 24 \div 4 \\ = 6 + 17 - 6 \\ = 17 \end{aligned}$$

$$21 + 84 \div 7 \times 2 - 9$$

$$\begin{aligned} 21 + 84 \div 7 \times 2 - 9 \\ = 21 + 84 \div 7 \times 2 - 9 \\ = 21 + 6 - 9 \\ = 36 \end{aligned}$$

$$52 + 19 - 5 \times 7$$

$$\begin{aligned} 52 + 19 - 5 \times 7 \\ = 52 + 19 - 5 \times 7 \\ = 52 + 19 - 35 \\ = 36 \end{aligned}$$