

Order of Operations

An understanding of “arithmetic” rules needs to be established to support carrying out calculations that involve more than one operation. This enables the development of more efficient calculations.

Hints

WORD BANK

Operations - A mathematical process. The most common operations are *add*, *subtract*, *multiply* and *divide* however there are many more, such as *powers* and *roots*.

Example: In $25 + 6 = 31$ the operation is add.

BODMAS

To correctly solve a calculation or simplify an expression, you must perform the operations in the correct order. This order is **BODMAS**.

B – Brackets

O – Of (This would include fractions, powers, roots etc.)

D – Division

M – Multiplication

A – Addition

S – Subtraction



Examples

Example 1:

$$\begin{aligned}
 & 2 + 3 \times 4 - 5 \\
 = & 2 + 12 - 5 \\
 = & 14 - 5 \\
 = & 9
 \end{aligned}$$

Do the multiplication first

Tidy up the rest of the calculation

Example 2:

$$\begin{aligned}
 & (7 - 2) \times (5 + 1) + 3 \\
 = & 5 \times 6 + 3 \\
 = & 30 + 3 \\
 = & 33
 \end{aligned}$$

Do the brackets first

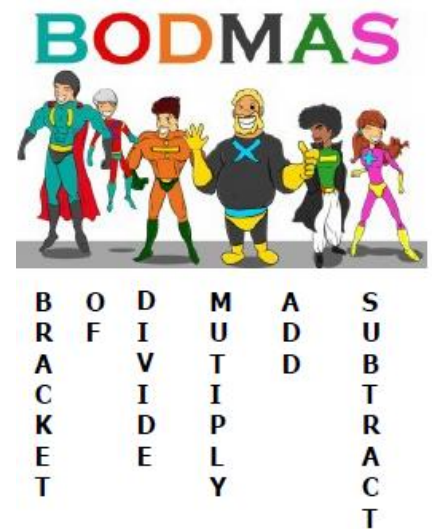
Tidy up the rest of the calculation

Example 3:

$$\begin{aligned}
 & 40 - 3^2 \times 2 \\
 = & 40 - 9 \times 2 \\
 = & 40 - 18 \\
 = & 22
 \end{aligned}$$

Do the powers first

Tidy up the rest of the calculation



Resources

Youtube Video with examples –

<https://www.youtube.com/watch?v=dAgfnK528RA>

BODMAS Game –

<http://www.math-play.com/Order-of-Operations-Millionaire/order-of-operations-millionaire-game.html>

Worksheets –

<https://www.math-drills.com/orderofoperations.php>