

+	sum(or total) of	addition
-	difference between	subtraction
x	product of	multiplication
/	quotient of	division

Rules for Multiplication & Division

$$(+) \times (+) = +$$

.....

$$(+) \times (-) = -$$

.....

$$(-) \times (+) = -$$

.....

$$(-) \times (-) = +$$

a '+' multiplied by a '+' gives a '+'

a '+' multiplied by a '-' gives a '-'

a '-' multiplied by a '+' also gives a '-'

a '-' multiplied by a '-' gives a '+'

$$\frac{+}{+} = +$$

.....

$$\frac{+}{-} = -$$

.....

$$\frac{-}{+} = -$$

.....

$$\frac{-}{-} = +$$

a '+' divided by a '+' gives a '+'

a '+' divided by a '-' gives a '-'

a '-' divided by a '+' also gives a '-'

a '-' divided by a '-' gives a '+'

### Examples

$$(+3)(-4) = -12 \quad (-2)/(+9) = -(2/9)$$

$$(-5)(-2) = +10 \quad (+3)/(-5) = -(3/5)$$

$$(+7)(+2) = +14 \quad (+6)/(+7) = +(6/7)$$

$$(-9)(+5) = -45 \quad (-5)/(-2) = +(5/2)$$

Operator Precedence ....This is the order in which calculations are performed.

**BIDMAS** - **b**rackets, **i**ndices, **d**ivision, **m**ultiplication, **a**dd, **s**ubtract

example #1

$$4 + 7 \times 2 - 3(5 + 9)$$

$$4 + 7 \times 2 - 3(14) \dots \text{work out what is inside the brackets}$$

$$4 + 14 - 42 \dots \text{do the multiplication } 7 \times 2 \text{ and } 3 \times 14$$

$$18 - 42 \dots \text{add the 4 and 14}$$

$$-24 \dots \text{subtract the 42}$$

example #2

$$7(12-9) \times (3+4) - 7 + 8 \times 20/5$$

$$7(12-9) \times (3+4) - 7 + 8 \times 20/5 \dots \text{work out what is inside the brackets}$$

$$7(3) \times (7) - 7 + 8 \times 20/5 \dots \text{division next}$$

$$7 \times 3 \times (7) - 7 + 8 \times 4 \dots \text{multiplication}$$

$$21 \times 7 - 7 + 32 \dots \text{more multiplication}$$

$$147 - 7 + 32 \dots \text{addition}$$

$$179 - 7 \dots \text{subtraction}$$

$$172$$

example #3

$3 + 9(6 - 2) - 12/3 + 4 \times 7$ .....work out what is inside the brackets

$3 + 9(4) - 12/3 + 4 \times 7$ .....division next

$3 + 9 \times 4 - 4 + 4 \times 7$ .....multiplication

$3 + 36 - 4 + 4 \times 7$ .....more multiplication

$3 + 36 - 4 + 28$  .....addition

$67 - 4$ .....subtraction

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