

Name: _____

Physics 11

Lesson 0.2 – Algebra

If I told you to solve for x in the expression below, you'd probably use BEDMAS (or something like it):

B
E
D
M
A
S

$$x = 2 \cdot 3^2 + 1$$

But what if I swap the x and the 3, like this:

$$3 = 2 \cdot x^2 + 1$$

Now, we need to _____ the equation to solve for x .

In other words, we want to _____ the operations so we can _____
_____.

To do *this* we need to know 2 things:

- 1) SAMDEB (_____)
- 2) We can do *whatever we want* to one side of an equation, as long as we _____
_____.

Let's try it...

$$3 = 2 \cdot x^2 + 1$$

Examples

Find the value of " v_i " in $v_{av} = \frac{v_f + v_i}{2}$ if $v_{av} = 4$, $v_f = 2.3$

Find the value of " m " in $E_k = \frac{1}{2}mv^2$ if $E_k = 500$, $v = 3$

In addition to doing calculations with *numbers*, we can also do calculations with _____.

Examples

Find the units of W if $W = Fd$, where F is in Newtons and d is in metres.

Find the units of a if $F = ma$, where F is in Newtons and m is in kilograms.