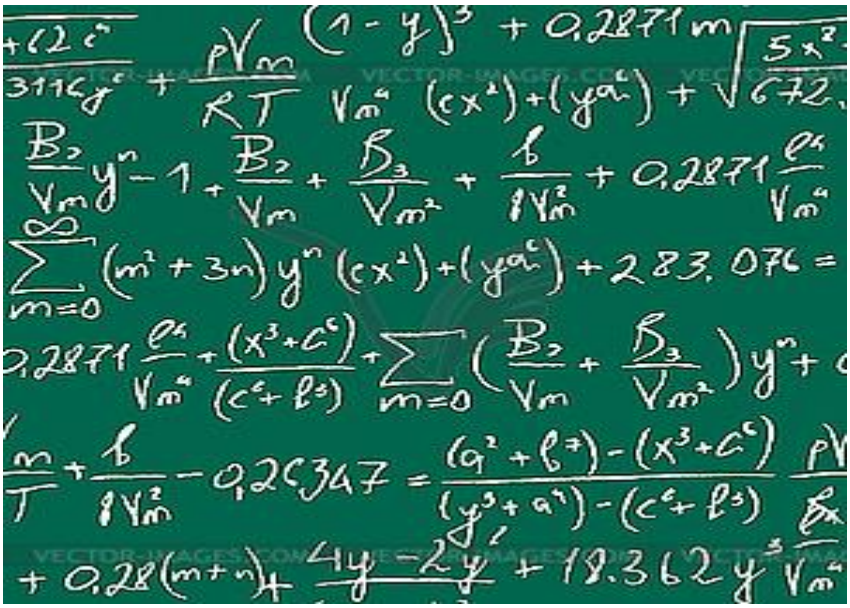
VISUAL PHYSICS ONLINE



REARRANGING EQUATIONS

A very importance and essential skills is to be able to rearrange an equation. This can be difficult but if you follow a well define procedure you will be able to master this skill. Always rewrite the equation with the quantity you want on the **left-hand side** of the equals sign and then perform a series of mathematical operations to both sides of the equation. If you have any difficulties, then do the operations step by step.

Example

Find an expression for T from the equation

$$P = \varepsilon \sigma A\left(T^4 - T_o^{\,4}\right)$$

Solution

T = ? on left hand side of equation

Rearrange equation step by step

$$\varepsilon \sigma A\left(T^4 - T_o^{\,4}\right) = P$$

$$\left(T^4 - T_o^{\,4}\right) = \frac{P}{\varepsilon \sigma A}$$

$$T^4 = T_o^{\,4} + \frac{P}{\varepsilon \sigma A}$$

$$T = \left(T_o^{\,4} + \frac{P}{\varepsilon \sigma A}\right)^{1/4}$$

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If you have any feedback, comments, suggestions or corrections please email:

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