Q: Memorize the Kinematic Equations

This quiz needs little explanation!

Make sure you know 'em!

Name	Equation
Definition of Acceleration	$v_f = v_i + a \cdot \Delta t$
The King of Kinematic Equations	$\Delta x = v_i \cdot \Delta t + \frac{1}{2} a (\Delta t)^2$
The Average Velocity Formula	$\Delta x = \left(\frac{v_i + v_f}{2} \right) \Delta t$
No-Time Equation	$v_f^2 = v_i^2 + 2a \cdot \Delta x$

You should certainly know what each symbol means.

There are some other formulas you should know as well:

Average Speed Formula	Average Speed $= \frac{d}{\Delta t} = \frac{\text{distance}}{\text{time}}$
Average Velocity Formula	Average Velocity $= \frac{\Delta x}{\Delta t} = \frac{\text{displacement}}{\text{time}}$
The "official" definition of acceleration (notice it's the same equation as the one above)	$a = \frac{\Delta v}{\Delta t} = \frac{v_f - v_i}{\Delta t}$

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The *kinematic equations* are allowed whenever *acceleration is constant*.
If acceleration is not constant, then you need to use *calculus* instead.

If *velocity is constant* the only equation is

$$v = \frac{\Delta x}{\Delta t}$$