

Kinematics

$v = \frac{\Delta d}{\Delta t}$	$v_{ave} = \frac{(v_1 + v_2)}{2}$	$a = \frac{\Delta v}{\Delta t}$	$\Delta d = v_1 \Delta t + \frac{1}{2} a (\Delta t)^2$
$\Delta d = v_1 \Delta t + \frac{1}{2} a (\Delta t)^2$	$v_2^2 = v_1^2 + 2a \Delta d$		

Chapters 2 + 3

$\nabla v = \frac{\Delta d}{\Delta t} \rightarrow$ for constant velocity.

If the velocity is not constant use:

$$v_{ave} = \frac{\Delta d}{\Delta t}$$

If constant Acceleration

$$a = \frac{\Delta v}{\Delta t} \quad \text{where } \Delta v = v_2 - v_1$$

$$v_{ave} = \frac{\Delta d}{\Delta t} \quad \text{where } v_{ave} = \frac{v_1 + v_2}{2}$$

maybe useful:

$$\Delta d = v_1 t + \frac{1}{2} a t^2$$

$$\Delta d = v_2 t - \frac{1}{2} a t^2$$

$$v_2^2 = v_1^2 + 2a \Delta d$$