Motion

Equations in the left-hand column are the ones most important to memorize.

Constant velocity (no acceleration)

$d = vt$

Average velocity and acceleration

$a_{avg} = (v_f - v_0)/t$

Accelerated motion

$d = d_0 + v_0 t + \frac{1}{2}at^2$

$v_f^2 = v_0^2 + 2ad$

$v_f = v_0 + at$

$d = \frac{1}{2}at^2$

$d = \frac{1}{2}at^2$

$d = \frac{1}{2}(v_f + v_0)t$

Symbols

On this page:

- a acceleration
- v velocity
- v_0 original velocity
- v_f final velocity
- t time
- d Displacement, distance

Falling objects:

Use acceleration due to gravity:

$g = -9.8\ m/s^2$

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