1 Motion on straight line

1.1 Chapter II

Displacement

Law	Formula
Displacement	$\Delta x = x_1 - x_2$

Speed and Velocity

Law	Formula
Average Speed	$s_{avg} = \dfrac{total - distance}{\Delta t}$
Average Velocity	$v_{avg} = \dfrac{x_2 - x_1}{t_2 - t_1}$
Instantaneous Velocity	$v = \lim\limits_{\Delta t \to 0} \dfrac{\Delta x}{\Delta}$

Acceleration

Law	Formula
Average Acceleration	$a_{avg} = \dfrac{\Delta v}{\Delta t}$
Instantaneous Acceleration	$a = \dfrac{dv}{dt} = \dfrac{d^2x}{dt^2}$

Constant Acceleration

Law	Formula
Missing Δx	$v = v_0 + at$
Missing v	$x - x_0 = v_0 t + \dfrac{1}{2}at^2$
Missing t	$v^2 = v_0^2 + 2a(x - x_0)$
Missing a	$x - x_0 = \dfrac{1}{2}(v_0 + v)t$
Missing v_0	$x - x_0 = vt - \dfrac{1}{2}at^2$