

Semester 1 Physics Formulas

$$x = vt + x_i \quad \Delta x = \frac{1}{2}at^2 + v_i t \quad v_f = at + v_i \quad a = \frac{\Delta v}{\Delta t}$$

$$\text{average velocity} = \frac{\Delta x}{\Delta t} \quad \text{speed} = \frac{\text{distance}}{\text{time}} \quad \Delta v = v_f - v_i$$

$$F_g = g \cdot m \quad (g = 9.8\text{N/kg on earth}) \quad F_f = \mu \cdot F_N \quad \Sigma F = m \cdot a$$

$$a_c = \frac{v^2}{r} \quad \Sigma F_c = m \cdot a_c \quad \Sigma F_c = \frac{m \cdot v^2}{r}$$

$$\omega = \frac{\text{degrees}}{t} \quad \text{linear velocity} = \frac{2 \cdot \pi \cdot r}{t}$$

Legend:

x = position

Δx = displacement

v = velocity

t = time

a = acceleration

F = force

g = grav. field strength

μ = coefficient of friction

m = mass

ω = angular velocity