1 km = 1000 m      1 m = 100 cm        1 mm = 0.001 m         1 kg = 1000 g

acceleration due to gravity on earth = g = 10 m/s²

weight (w) = mass (m) × g ,   w = m × g

Net force (F_{Net}) = mass (m) × acceleration (a),   F_{Net} = m × a

\text{avg velocity} = \frac{\text{distance}}{\text{time}} \quad \text{d} = \text{v} \times \text{t} \text{ for } a = 0 \quad \text{acceleration} = \frac{\text{velocity change}}{\text{time}}

Distance an object falls from rest in time t: d = \frac{1}{2} \times g \times t²

Speed an object acquires after falling from rest for a time t: v = g × t

time (t) to travel a distance (d) at an acceleration a: \quad t = \sqrt{\frac{2d}{a}}

present velocity (v) = initial velocity (v₀) + acceleration (a) × time (t) 
\quad v = v₀ + a × t

time (t) for a ball thrown up with initial velocity v₀ to reach its highest point:
\quad t = \frac{v₀}{g}

Maximum height (h) an object reaches if thrown vertically up with velocity v₀:
\quad h = \frac{v₀²}{2g}

initial velocity v₀ that an object thrown vertically up requires to reach a height h:
\quad v₀ = \sqrt{2g × h}

time (t) for an object starting from rest to fall a distance h: \quad t = \sqrt{\frac{2h}{g}}

momentum = mass × velocity = m (kg) × v (m/s),   p = m × v

Work (W in Joules) = Force (F in N) × distance (d in m) = F × d

Kinetic Energy (J) = \frac{1}{2} m v²

Gravitational Potential Energy (Joules) = m (kg) × g (m/s²) × height (m)
\quad \text{GPE} = m \times g \times h = w \times h

Centripetal acceleration \quad a_{\text{cent}} = \frac{(\text{velocity})²}{\text{radius}} = \frac{v²}{r}

Centripetal force \quad F_c = m \times a_{\text{cent}}

Torque (N m) \quad \text{= Force (N) x lever arm (m)}