

equations of motion

$$v = u + at$$

$$s = (u + v)t/2$$

$$s = ut + \frac{1}{2}at^2$$

$$v^2 = u^2 + 2as$$

projectile motion

$$g = 9.81 \text{ m s}^{-2}$$

3.1 Equations of motion KC

resultant force
acceleration

$$F = ma$$

$$p = mv$$

1st law 2nd law 3rd law

stationary uniform motion

4.1 Momentum and Newton's laws of motion KC

MASS: 75kg WEIGHT: 735N

MASS: 75kg WEIGHT: 122N

$$W = mg$$

terminal velocity

4.2 Non-uniform motion KC

uniform gravitational field

$$F = mg$$

uniform electric field

$$F = Eq$$

5.1 Types of force KC

17.1 Concept of an electric field KC

17.2 Uniform electric fields KC

$$E = \frac{\Delta V}{\Delta d}$$

$$F = \frac{QV}{d}$$

1 2 → 1 2 → 1 2 →

Momentum conserved: $m_1v_1 + m_2v_2 = m_1v'_1 + m_2v'_2$

elastic collision inelastic collision

1 2 → 1 2 → 1 2 →

4.3 Linear momentum and its conservation KC