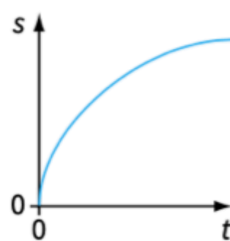


1. SI unit: kg m s A K

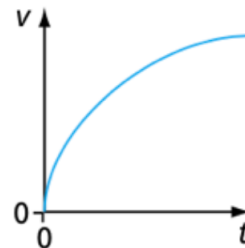
2. Density: $\rho = \frac{m}{V}$

3. Speed: $v = \frac{s}{t} = \frac{\Delta s}{\Delta t}$

4. Acceleration: $a = \frac{\Delta v}{\Delta t} = \frac{v - u}{\Delta t}$



Slope = speed



Slope = acceleration
Area = distance

5. Weight: $W = mg$

6. Resultant force: $F = ma$

7. Impulse = $F\Delta t = mv - mu = \Delta p$

8. Momentum: $p = mv$

9. Conservation of momentum: $m_1 \vec{u}_1 + m_2 \vec{u}_2 = m_1 \vec{v}_1 + m_2 \vec{v}_2$

10. Moment: $M = r \times F$

11. Principle of moment: $M_{\text{clockwise}} = M_{\text{anti-clockwise}}$

12. Hooke's law: $F = kx$

13. Pressure(in general): $p = \frac{F}{A}$; liquid pressure: $p = \rho gh$

14. Gravitational potential energy(g.p.e): $E_p = mgh$

15. Kinetic energy(k.e.): $E_k = \frac{1}{2}mv^2$

16. Efficiency = $\frac{\text{useful energy output}}{\text{total energy input}} = \frac{\text{total energy} - \text{wasted energy}}{\text{total energy input}}$