

# Physics Formulas

## Mechanics

- Force:  $F = ma$
- Kinetic Energy:  $KE = \frac{1}{2}mv^2$
- Potential Energy:  $PE = mgh$
- Momentum:  $p = mv$
- Work:  $W = Fd \cos \theta$

## Electricity & Magnetism

- Ohm's Law:  $V = IR$
- Coulomb's Law:  $F = k \cdot \frac{k(q_1 q_2 / r^2)}{r^2}$
- Magnetic Force:  $F = qvB \sin \phi$
- Electric Power:  $P = IV$

## Thermodynamics

- First Law:  $\Delta U = Q - W$
- Ideal Gas Law:  $PV = nRT$