

$$d = vt$$

**Speed, distance and time  
where the speed is constant**

$$d = \bar{v}t$$

**Average speed, distance and  
time**

$$s = vt$$

**Velocity, displacement and  
time where the velocity is  
constant**

$$s = \bar{v}t$$

**Average velocity,  
displacement and time**

$$a = \frac{v-u}{t}$$

**Acceleration, initial and final  
velocity, and time**

$$F = ma$$

**Newton's 2<sup>nd</sup> law –  
unbalanced force, mass and  
acceleration**

$$W = mg$$

**Weight, mass, and  
gravitational field strength**

$$E_W = Fd$$

**Work done, unbalanced  
force, and distance**

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**Work done, unbalanced  
force, and distance**

$$E_P = mgh$$

**Potential energy, mass, gravitational field strength, and height**

$$E_K = \frac{1}{2}mv^2$$

**Kinetic energy, mass, and velocity**

$$Q = It$$

**Charge, current, and time**

$$V = IR$$

**Voltage, current, and resistance**

$$V_2 = \left(\frac{R_2}{R_1 + R_2}\right)V_S$$

**Voltage dividers: comparing component voltages and resistances to the supply voltage and total resistance**

$$\frac{V_1}{V_2} = \frac{R_1}{R_2}$$

**Voltage dividers: component voltages and resistances**

$$P = \frac{E}{t}$$

**Power, energy and time**

$$P = IV$$

**Power, current and voltage**

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**Power, energy and time**

$$P = IV$$

**Power, current and voltage**

$$P = I^2 R$$

**Power, current and resistance**

$$P = \frac{V^2}{R}$$

**Power, voltage and resistance**

$$E_h = cm\Delta T$$

**Heat energy, specific heat capacity, mass, and temperature change**

$$p = \frac{F}{A}$$

**Pressure, force, and area**

$$\frac{pV}{T} = \text{constant}$$

**Gas laws: combined equation**

$$p_1 V_1 = p_2 V_2$$

**Gas laws: pressure and volume**

$$\frac{V_1}{T_1} = \frac{V_2}{T_2}$$

**Gas laws: volume and temperature**

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**Gas laws: pressure and temperature**

$$E_h = ml$$

**Heat energy, specific latent heat, and mass**

$$R_T = R_1 + R_2 + \dots$$

**Total resistance of resistors in series**

$$\frac{1}{R_T} = \frac{1}{R_1} + \frac{1}{R_2} + \dots$$

**Total resistance of resistors in parallel**

$$T = \frac{1}{f}$$

**Frequency and period**

$$A = \frac{N}{t}$$

**Activity, Number of decays, and time**

$$D = \frac{E}{m}$$

**Absorbed dose, energy, and mass**

$$H = DW_R$$

**Equivalent dose, absorbed dose, and radiation weighting factor**

$$\dot{H} = \frac{H}{t}$$

**Equivalent dose rate, equivalent dose, and time**

$$E_h = ml$$

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