

## GCSE Electricity Equations

$$P = \frac{E}{t} \quad (\text{Power} = \text{Energy Transferred} \div \text{Time})$$

$$P = \frac{W}{t} \quad (\text{Power} = \text{Work Done} \div \text{Time})$$

$$\text{Efficiency} = \frac{\text{Useful Output Energy Transfer}}{\text{Total Input Energy Transfer}}$$

$$\text{Efficiency} = \frac{\text{Useful Power Output}}{\text{Total Power Input}}$$

$$Q = I \times t \quad (\text{Charge Flow} = \text{Current} \times \text{Time})$$

$$V = I \times R \quad (\text{Potential Difference} = \text{Current} \times \text{Resistance})$$

$$P = V \times I \quad (\text{Power} = \text{Potential Difference} \times \text{Current})$$

$$P = I^2 \times R \quad (\text{Power} = \text{Current}^2 \times \text{Resistance})$$

$$E = Q \times V \quad (\text{Energy Transferred} = \text{Charge Flow} \times \text{Potential Difference})$$

$$E = V \times I \times t \quad (\text{Energy Transferred} = \text{Potential Difference} \times \text{Current} \times \text{Time})$$

$$W = V \times Q \quad (\text{Work Done} = \text{Potential Difference} \times \text{Charge Flow})$$