# Electricity



- Current (I) = Charge (Q) / Time (t)
  - $I = \frac{Q}{t}$
- Electromotive force and potential difference
  - $Emf = \frac{W}{Q}$
  - $Pd. = \frac{W}{Q}$
- Ohm's law
  - $V = IR\ ; I = \frac{V}{R}; R = \frac{V}{I}$
- Electrical power
  - $P = VI\ ; P = I^2R\ ;\ P = \frac{V^2}{R}$
- Electrical energy
  - $E = IVt$
- Series Circuit
  - $Total\ Resistance = R1 + R2 + R3 + \ldots$
- Parallel Circuit
  - $\frac{1}{Total\ Resistance} = \frac{1}{R1} + \frac{1}{R2} + \frac{1}{R3} + \ldots$
- Potential divider
  - $\frac{R1}{R2} = \frac{V1}{V2}$