

Power

Sample Problem

- ① Calculate the power of a toaster that uses 72000J of energy in 50s.

$$E = 72000\text{J}$$

$$\Delta t = 50\text{s}$$

$$P = ?$$

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

$$= \frac{(72000\text{J})}{(50\text{s})}$$

$$= 1440\text{W}$$

- ② Calculate the power of a vacuum cleaner if the voltage is 120V, and the current is 7.90A.

$$V = 120\text{V}$$

$$I = 7.90\text{A}$$

$$P = ?$$

$$P = IV$$

$$= (7.90\text{A})(120\text{V})$$

$$= 948\text{W}$$