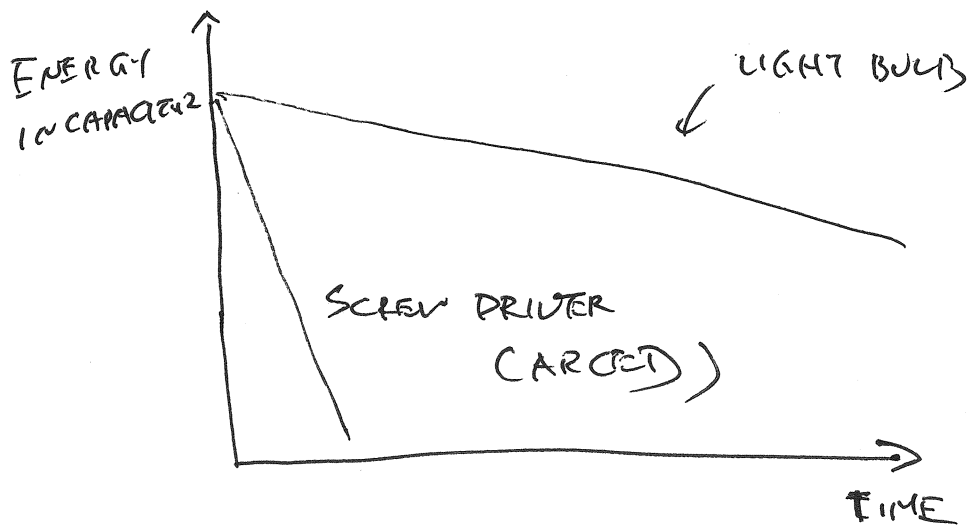
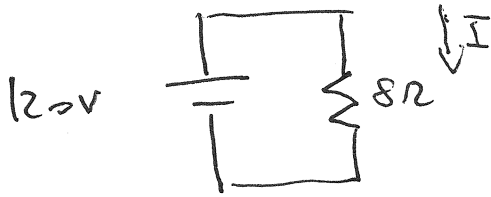


ENERGY : J : JOULES (SAME AS SAY  $\text{mJh}$ )

POWER :  $\frac{dU}{dt}$  : JOULES/SECOND : WATTS





WHAT IS THE CURRENT?

$$V = IR$$

$$120V = I(8\Omega)$$

$$I = \frac{120V}{8\Omega} = 15A$$

WHAT IS THE POWER DISSIPATED THRU THE RESISTOR?

$$P = IV = 15A \cdot 120V = 1800W$$

$$= 1.8kW$$

8 BATTERIES CARRY ~~8~~ 4 kWh

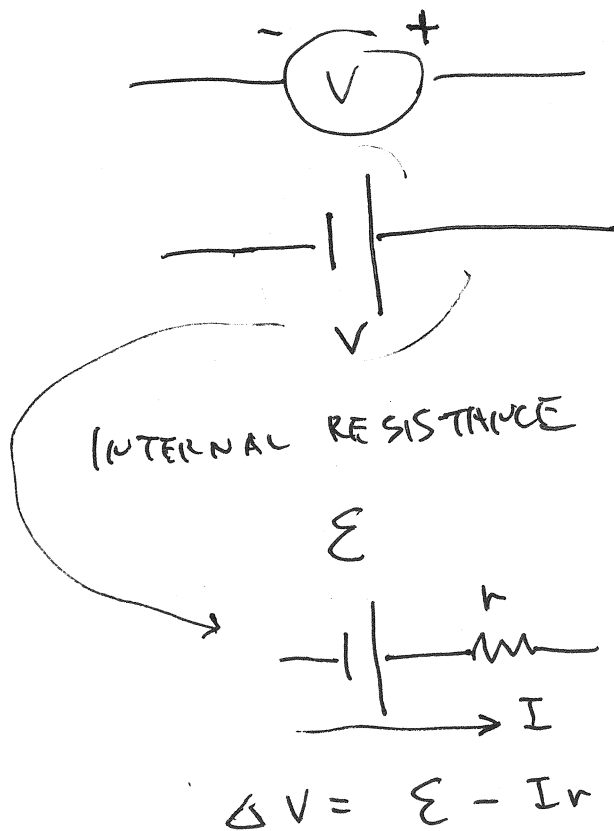
WATT! J/s      1hr : 3600 sec

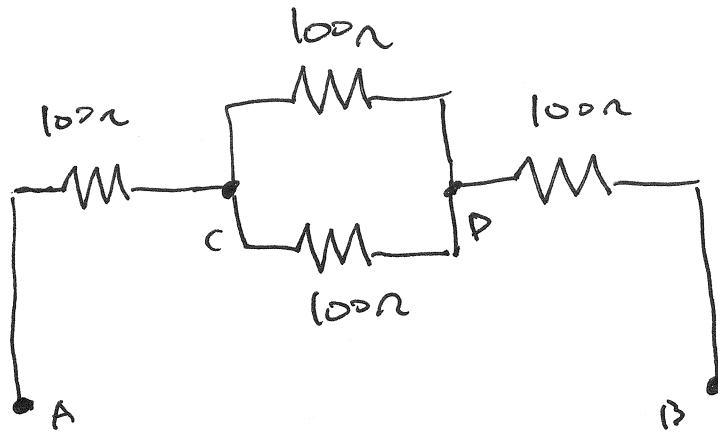
CAPACITY : ~~4~~ kWh

using 1000W : IT TAKES 4hr TO GO EMPTY

# ELECTROMOTIVE FORCE (VOLTS)

$\mathcal{E}$  : MAX VOLTAGE A BATTERY CAN SUPPLY

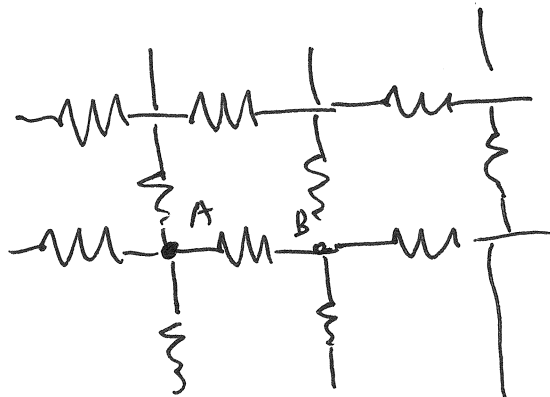
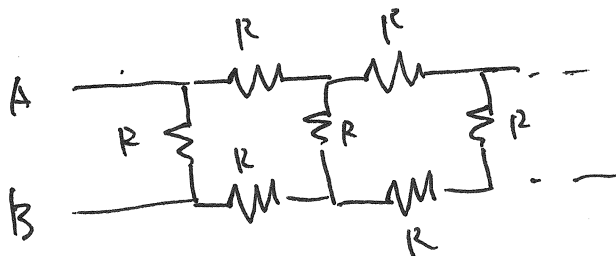


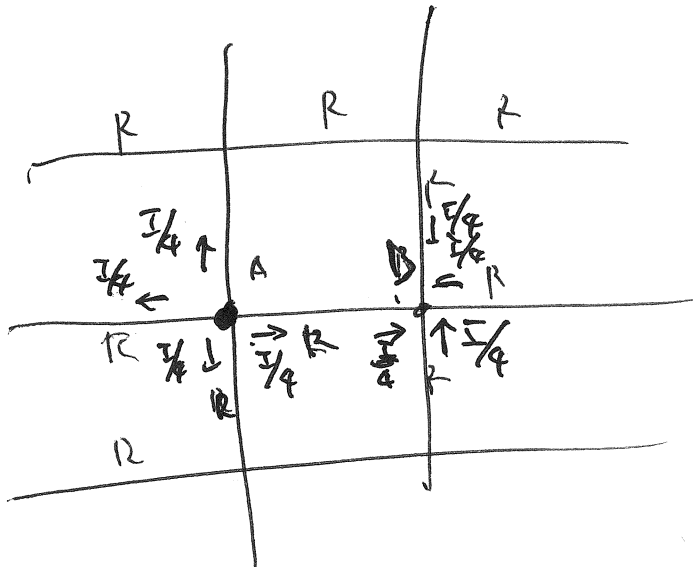


WHAT IS  $R_{AB}$ ?

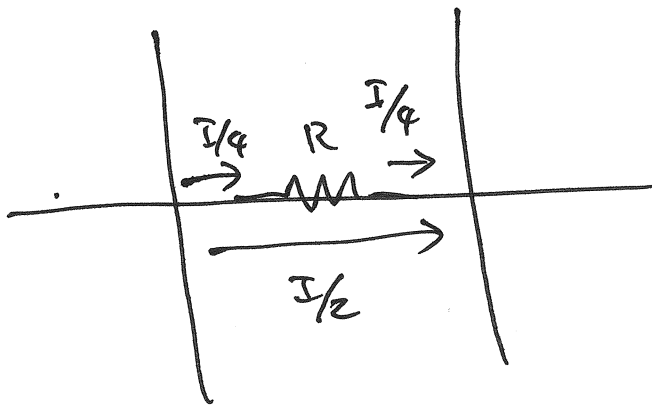
$$\frac{1}{R_{CD}} = \frac{1}{100} + \frac{1}{100} \Rightarrow R_{CD} = 50\Omega$$

$$R_{AB} = 250\Omega$$



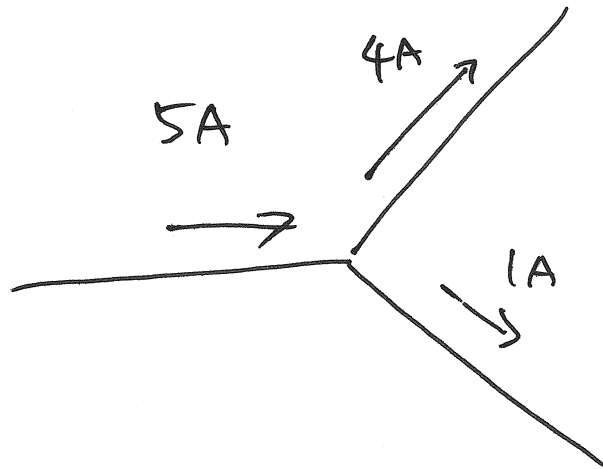


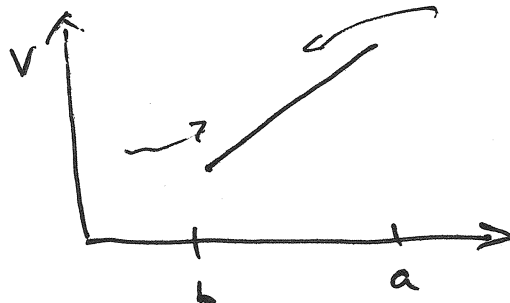
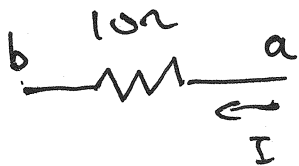
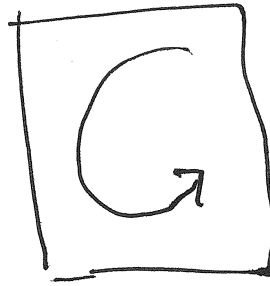
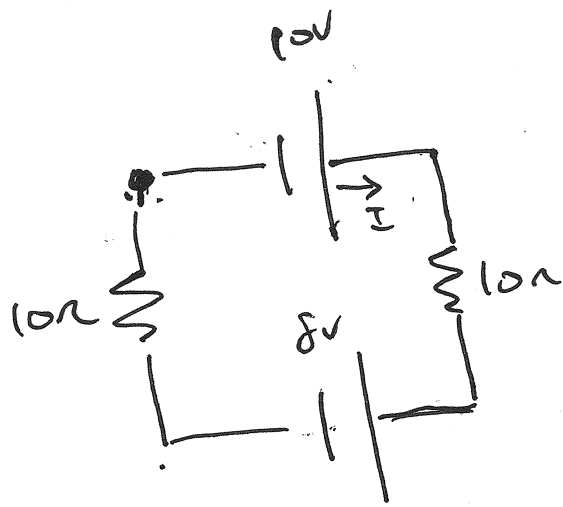
$$\underline{I R_{AD}} = \underline{V_{AB}}$$



$$V_{AB} = \left(\frac{I}{2}\right) R = I R_{AB}$$

$$R_{AD} = \frac{R}{2}$$





$$10I + 8V + 10I - 10V = 0$$

$$20I - 2 = 0$$

$$I = \frac{1}{10} \text{ A}$$