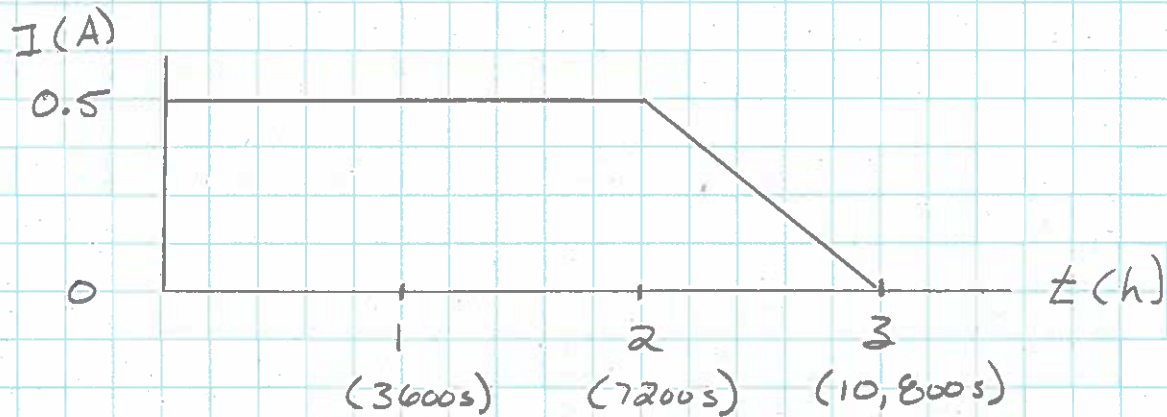


$$I = \frac{1}{R} \Delta V \quad \text{where } R = 3 \Omega$$

So, the current as a function of time looks like:



Now: $I = \frac{dQ}{dt}$

So, the total charge supplied by the battery is:

$$Q = \int_0^{\infty} I dt = \text{area under } I \text{ vs. } t \text{ graph}$$
$$= (7200s)(0.5A) + \frac{1}{2}(3600s)(0.5A)$$

$$\underline{Q = 4500C}$$

This corresponds to

$$N = \frac{Q}{e} = 2.812 \times 10^{22} \text{ electron.}$$

