Electrical Energy

Sample Problem

① Calculate the energy released from a battery in a flashlight that was switched on for 4.5 hours in which the voltage was 6V, and the current flowing through the bulb was 0.35A.

$V = 6V$
$I = 0.35A$
$\Delta t = 4.5h$

change hours to seconds
$4.5h \times 60 = 270$ minutes
$270m \times 60 = 16200s$

$$E = V \times I \times \Delta t$$
$$= (6V)(0.35A)(16200s)$$
$$= 34020\ J$$