

## Electric Current Problems

1. The filament of a light has 3150 C of charge flow through it in 35 min. What is the current in the filament?
2. A load has a current of 88 mA flow through it. What quantity of charge flows through the load in 51 s?
3. A heater has a current of 11 A flow through it. How many hours will it take for 80 kC of charge to flow through the heater?
4. How many electrons are in a charge of 33 C?
5. A student from a different universe calculates that 4.6  $\mu\text{C}$  of charge is  $3.1 \times 10^{13}$  electrons. What is the charge on an electron in that universe?
6. In a high voltage transmission line,  $1.4 \times 10^{22}$  electrons go past a tower in 25 s. What is the current in the transmission line?
7. A load has a current of 12 mA flow through it. How many electrons flow through the load in 35 s?