

An 8.00×10^6 kg electromagnet built in Switzerland draws a current of 3.00×10^2 A. How much charge passes through the magnet in 2.4 min?

ANSWER:

$$I = \frac{q}{t}, \text{ where } q - \text{charge}, t - \text{time}, I - \text{current}$$

$$q = I \cdot t$$

$$t = 2.4 \cdot 60 = 144 \text{ sec}$$

$$q = 3 \cdot 10^2 \cdot 144 = 432 \cdot 10^2 \text{ C}$$