

- 4.** The compressor on an air conditioner draws  $40.0\text{ A}$  when it starts up. If the start-up time is  $0.50\text{ s}$ , how much charge passes a cross-sectional area of the circuit in this time?
- 5.** A total charge of  $9.0\text{ mC}$  passes through a cross-sectional area of a nichrome wire in  $3.5\text{ s}$ .
  - a.** What is the current in the wire?
  - b.** How many electrons pass through the cross-sectional area in  $10.0\text{ s}$ ?
  - c.** If the number of charges that pass through the cross-sectional area during the given time interval doubles, what is the resulting current?