

PQ 3b Resistance

Q and A

Q1

- A car interior lamp with a resistance of 33 Ohm's is placed across a 12-V battery. What is the current through the circuit?

Q2

- A motor with an operating resistance of 32 Ohm's is connected to a voltage source. The current in the circuit is 3.8 A. What is the voltage of the source?

Q3

- A table lamp draws a current of 0.50 A when it is connected to a 120-V source.
- **a.** What is the resistance of the lamp?

- **b.** What is the power consumption of the table lamp?

Q4

- A 75-W table lamp is connected to 125 V.
- **a.** What is the current through the lamp?

- **b.** What is the resistance of the table lamp?

Q5

- A 15 Ohm electric heater operates on a 120-V outlet.
- a. What is the current through the heater?

Q6

- A 39 Ohm resistor is connected across a 45-V battery.
- a. What is the current in the circuit?

Q7

- The resistance of an electric oven element at operating temperature is 11 Ohm's
- **a.** If 220 V are applied across it, what is the current through the stove element?

Q8

- A digital clock has a resistance of 12,000 Ohm's and is plugged into a 115-V outlet.
- a. How much current does it draw?

