

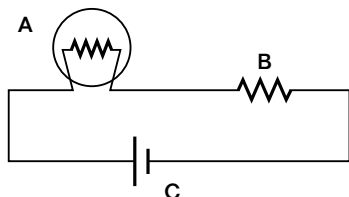


# Standardized Test Prep

## MULTIPLE CHOICE

- Which of the following is the correct term for a circuit that does not have a closed-loop path for electron flow?
  - closed circuit
  - dead circuit
  - open circuit
  - short circuit
- Which of the following is the correct term for a circuit in which the load has been unintentionally bypassed?
  - closed circuit
  - dead circuit
  - open circuit
  - short circuit

Use the diagram below to answer questions 3–5.

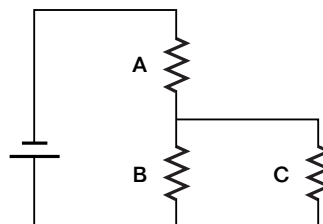


- Which of the circuit elements contribute to the load of the circuit?
  - Only A
  - A and B, but not C
  - Only C
  - A, B, and C
- Which of the following is the correct equation for the equivalent resistance of the circuit?
  - $R_{eq} = R_A + R_B$
  - $\frac{1}{R_{eq}} = \frac{1}{R_A} + \frac{1}{R_B}$
  - $R_{eq} = I\Delta V$
  - $\frac{1}{R_{eq}} = \frac{1}{R_A} + \frac{1}{R_B} + \frac{1}{R_C}$

- Which of the following is the correct equation for the current in the resistor?

- $I = I_A + I_B + I_C$
- $I_B = \frac{\Delta V}{R_{eq}}$
- $I_B = I_{total} + I_A$
- $I_B = \frac{\Delta V}{R_B}$

Use the diagram below to answer questions 6–7.



- Which of the following is the correct equation for the equivalent resistance of the circuit?
  - $R_{eq} = R_A + R_B + R_C$
  - $\frac{1}{R_{eq}} = \frac{1}{R_A} + \frac{1}{R_B} + \frac{1}{R_C}$
  - $R_{eq} = I\Delta V$
  - $R_{eq} = R_A + \left(\frac{1}{R_B} + \frac{1}{R_C}\right)^{-1}$
- Which of the following is the correct equation for the current in resistor B?
  - $I = I_A + I_B + I_C$
  - $I_B = \frac{\Delta V}{R_{eq}}$
  - $I_B = I_{total} + I_A$
  - $I_B = \frac{\Delta V_B}{R_B}$