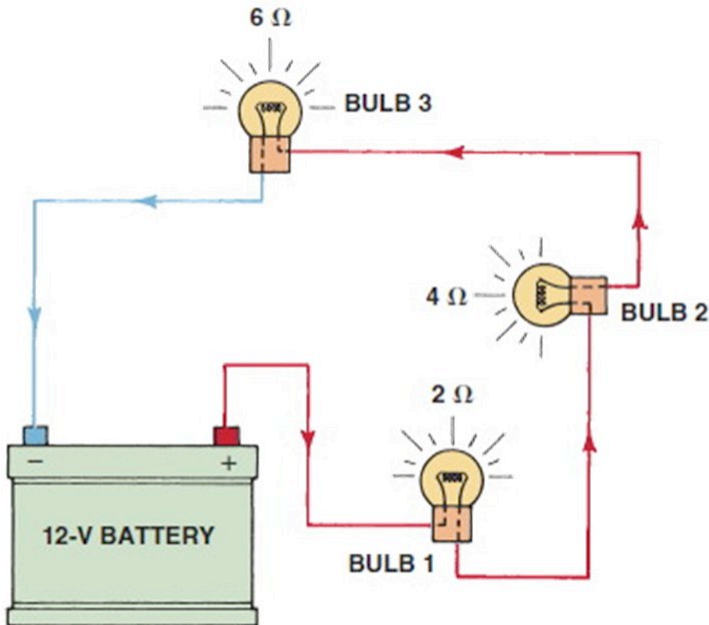


Name \_\_\_\_\_

**MULTIPLE CHOICE.** Choose the one alternative that best completes the statement or answers the question.

1) Which one of the bulbs in this circuit will drop (use up) the most voltage? 1) \_\_\_\_\_



- A) Bulb 1
- B) Bulb 2
- C) Bulb 3
- D) They will all drop the same amount of voltage

2) In a series-parallel circuit, how is the total resistance in the circuit determined? 2) \_\_\_\_\_

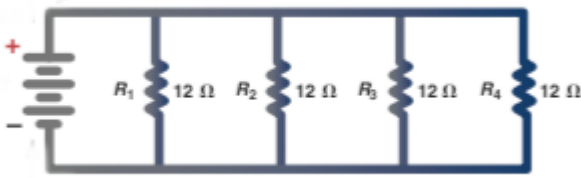
- A) All of the resistances are added together.
- B) The series resistance values are added together and then subtracted from the resistances in parallel.
- C) The parallel resistance values are added together and then subtracted from the resistance in series.
- D) None of the above

3) The voltage drop for each branch of a parallel circuit is \_\_\_\_\_. 3) \_\_\_\_\_

- A) equal
- B) reduced by the resistance of loads in each branch
- C) increased by the resistance of loads in each branch
- D) none of these

4) What is the total resistance of this circuit?

4) \_\_\_\_\_



- A) 4 ohms
- B) 36 ohms
- C) 3 ohms
- D) Not enough information

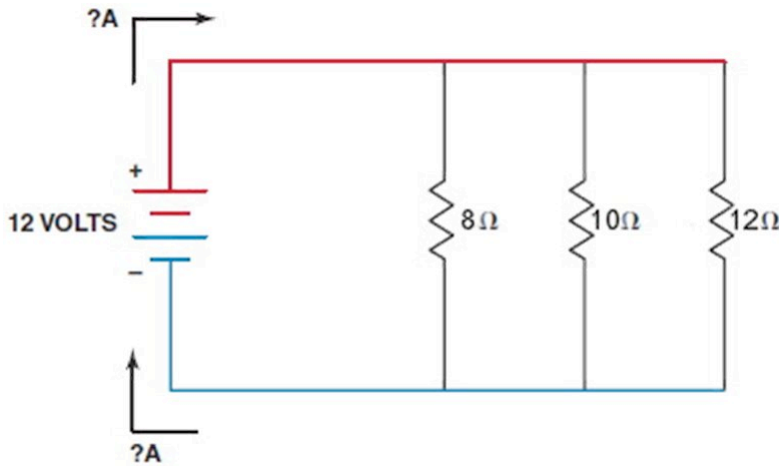
5) The sum of the voltage drops in a series circuit equals the \_\_\_\_\_.

5) \_\_\_\_\_

- A) amperage
- B) resistance
- C) source voltage
- D) wattage

6) What is the total current flow in this parallel circuit?

6) \_\_\_\_\_



- A) 3.7 A
- B) 0.4 A
- C) 2.5 A
- D) Not enough information

7) A series circuit has two 10-ohm bulbs. A third 10-ohm bulb is added in series. Technician A says that the three bulbs will be dimmer than when only two bulbs were in the circuit. Technician B says that the current in the circuit will increase. Which technician is correct?

7) \_\_\_\_\_

- A) Technician A only
- B) Technician B only
- C) Both technicians
- D) Neither technician

- 8) The amperage in a series circuit \_\_\_\_\_. 8) \_\_\_\_\_
- A) is the same anywhere in the circuit
  - B) varies in the circuit due to the different resistances
  - C) is high at the beginning of the circuit and decreases as the current flows through the resistance
  - D) is always less returning than leaving the battery
- 9) In a series circuit, total circuit resistance is equal to the \_\_\_\_\_ of the resistance of all loads in the circuit. 9) \_\_\_\_\_
- A) sum
  - B) difference
  - C) dividend
  - D) none of these
- 10) Technician A says that the sum of the voltage drops in a series circuit should equal the source voltage. Technician B says the current (amperes) varies depending on the value of the resistance in a series circuit. Which technician is correct? 10) \_\_\_\_\_
- A) Technician A only
  - B) Technician B only
  - C) Both technicians
  - D) Neither technician