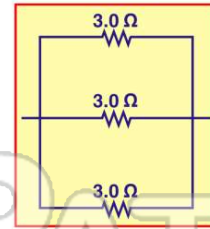




Name _____ Class _____ Date _____

- 1 A 10-ohm resistor and a 20-ohm resistor are connected in series to a voltage source. When the **current** through the **10-ohm resistor** is **2.0 amperes**, what is the **current** through the **20-ohm resistor**?
- A 1.0 A
 - B 2.0 A
 - C 0.50 A
 - D 4.0 A

- 2 What is the **total resistance** of the circuit segment shown in the diagram below?
- A 1.0 Ω
 - B 9.0 Ω
 - C 3.0 Ω
 - D 27 Ω



- 3 A **12.0-meter** length of **copper wire** has a resistance of **1.50 ohms**. How **long** must an **aluminum wire** with the same cross-sectional area be to have the **same resistance**?
- A 7.32 m
 - B 8.00 m
 - C 12.0 m
 - D 18.0 m



- 4 What is the **total current** in a circuit consisting of **six operating 100-watt lamps** connected in parallel to a **120-volt source**?
- A 5 A
 - B 20 A
 - C 600 A

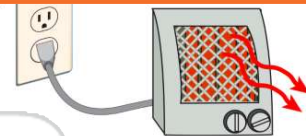


PREVIEW

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- 7
- A 20 Ω
 - B 40 Ω
 - C 80 Ω
 - D 160 Ω

- B 28 Ω
- C 55 Ω
- D 220 Ω



- 9 A **10-meter** length of **wire** with a cross-sectional area of 3.0×10^{-6} square meter has a resistance of 9.4×10^{-2} ohm at **20° Celsius**. The wire is most likely **made of**
- A silver
 - B copper
 - C aluminum
 - D tungsten

- 10 A **potential drop of 50 volts** is measured across a **250-ohm resistor**. What is the **power** developed in the resistor?
- A 0.20 W
 - B 5.0 W
 - C 10 W
 - D 50 W



ANSWER KEY

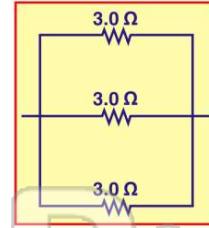
A 10-ohm resistor and a 20-ohm resistor are connected in series to a voltage source. When the **current** through the **10-ohm resistor** is **2.0 amperes**, what is the **current** through the **20-ohm resistor**?

- A 1.0 A
- B 2.0 A
- C 0.50 A
- D 4.0 A

(b)

What is the **total resistance** of the circuit segment shown in the diagram below?

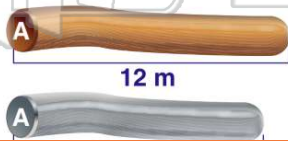
- A 1.0 Ω
- B 9.0 Ω
- C 3.0 Ω
- D 27 Ω



(a)

A **12.0-meter** length of **copper wire** has a resistance of **1.50 ohms**. How **long** must an **aluminum wire** with the same cross-sectional area be to have the **same resistance**?

- A 7.32 m
- B 8.00 m
- C 12.0 m
- D



(a)

What is the **total current** in a circuit consisting of **six operating 100-watt lamps** connected in parallel to a **120-volt source**?

- A 5 A
- B 20 A
- C 600 A
- D 12,000 A



(a)

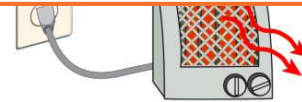


PREVIEW

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- C 80 Ω
- D 160 Ω

- C 55 Ω
- D 220 Ω



A **10-meter** length of wire with a cross-sectional area of 3.0×10^{-6} square meter has a resistance of 9.4×10^{-2} ohm at 20° Celsius. The wire is most likely **made of**

- A silver
- B copper
- C aluminum
- D tungsten

(c)

A **potential drop of 50 volts** is measured across a **250-ohm resistor**. What is the **power** developed in the resistor?

- A 0.20 W
- B 5.0 W
- C 10 W
- D 50 W

(c)