Electric Circuits

Phys Sci

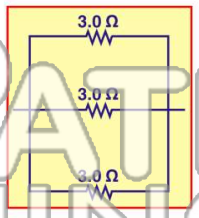
Name_____ Class_____ Date_____

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**

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

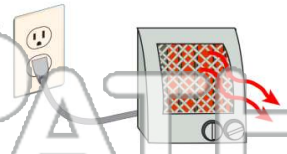
5

7 What is the **resistance** of **each** resistor?

A 20 Ω
B 40 Ω
C 80 Ω
D 160 Ω

current. The **resistance** of the heater is

A 0.018 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

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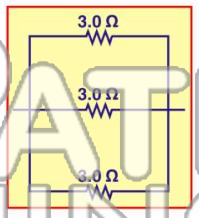

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PREVIEW

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5

D

7

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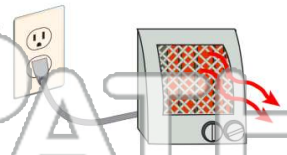

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