



Name _____ Class _____ Date _____

- 1 A wire carries a current of **2.0 amperes**. How many **electrons** pass a **given point** in this wire in **1.0 second**?
- A 1.3×10^{18}
 - B 2.0×10^{18}
 - C 1.3×10^{19}
 - D 2.0×10^{19}

- 3 A current of **3.0 amperes** is flowing in a circuit. How much **charge** passes a **given point** in the circuit in **30 seconds**?
- A 0.10 C
 - B 10 C
 - C 33 C

- 2 In order to measure the current through an electrical device, an **ammeter** is placed in series with the device. Compared to the electrical device, the **ammeter** should have a much
- A lower permeability
 - B higher permeability
 - C lower resistance
 - D higher resistance

- 4 Compared to the power dissipated in the **1.0-ohm** resistor, the **power dissipated** in the **3.0-ohm** resistor is
- A less
 - B greater
 - C the same



PREVIEW

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- 7
- B increase
 - C remain the same

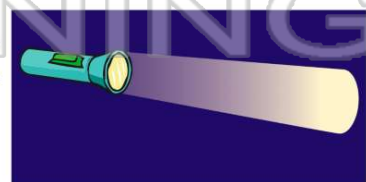
- B increases and the current through it increases
- C decreases and the current through it decreases
- D decreases and the current through it increases



- 9 During a thunderstorm, a lightning strike transfers **12 coulombs** of charge in **2.0×10^{-3} second**. What is the **average current produced** in this strike?
- A 1.7×10^{-4} A
 - B 2.4×10^{-2} A
 - C 6.0×10^3 A
 - D 9.6×10^3 A



- 10 How much **current** flows through a **12-ohm** flashlight bulb operating at **3.0 volts**?
- A 0.25 A
 - B 0.75 A
 - C 3.0 A
 - D 4.0 A





ANSWER KEY

A wire carries a current of **2.0 amperes**. How many **electrons** pass a **given point** in this wire in **1.0 second**?

- A 1.3×10^{18}
- B 2.0×10^{18}
- C 1.3×10^{19}
- D 2.0×10^{19}

(C)

In order to measure the current through an electrical device, an **ammeter** is placed in series with the device. **Compared to the electrical device, the ammeter should have a much**

- A lower permeability
- B higher permeability
- C lower resistance
- D higher resistance

(C)

A current of **3.0 amperes** is flowing in a circuit. How much **charge** passes a **given point** in the circuit in **30 seconds**?

- A 0.10 C
- B 10 C
- C 33 C
- D 90 C

(d)

Compared to the power dissipated in the **1.0-ohm** resistor, the **power dissipated** in the **3.0-ohm** resistor is

- A less
- B greater
- C the same

(a)



PREVIEW

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During a thunderstorm, a lightning strike transfers **12 coulombs** of charge in **2.0×10^{-3} second**. What is the **average current produced** in this strike?

- A 1.7×10^{-4} A
- B 2.4×10^{-2} A
- C 6.0×10^3 A
- D 9.6×10^3 A



(C)

- through it increases
- C decreases and the current through it decreases
- D decreases and the current through it increases



How much **current** flows through a **12-ohm** flashlight bulb operating at **3.0 volts**?

- A 0.25 A
- B 0.75 A
- C 3.0 A
- D 4.0 A



(a)