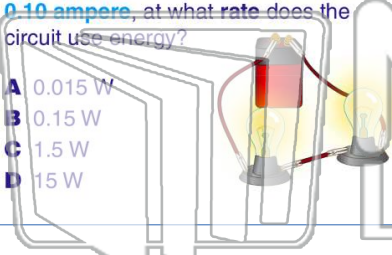




Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 In a **series circuit** containing two lamps, the battery supplies a **potential difference of 1.5 volts**. If the **current** in the circuit is **0.10 amperes**, at what rate does the circuit use energy?

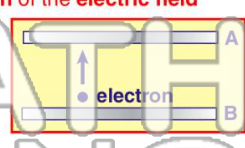
A 0.015 W  
B 0.15 W  
C 1.5 W  
D 15 W



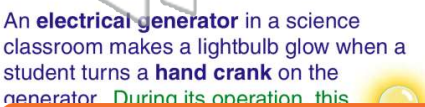
2 An **electron** placed between **oppositely charged** parallel plates *A* and *B* moves toward plate *A*, as represented in the diagram below.

What is the **direction of the electric field** between the plates?

A toward plate *A*  
B toward plate *B*  
C into the page  
D out of the page



3 An **electrical generator** in a science classroom makes a lightbulb glow when a student turns a **hand crank** on the generator. **During its operation**, this



4 Which changes would cause the **greatest increase** in the **rate of flow of charge** through a conducting wire?

A increasing the applied potential difference

5

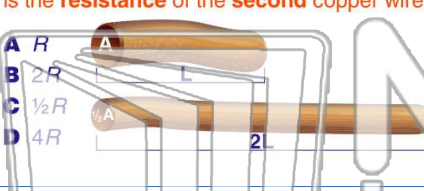


**PREVIEW**

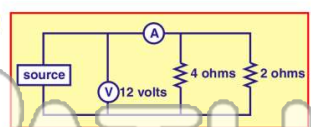
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7 wire at the same temperature has a length of  $2L$  and a cross-sectional area of  $\frac{1}{2}A$ . What is the **resistance** of the **second** copper wire?

A  $R$   
B  $2R$   
C  $\frac{1}{2}R$   
D  $4R$




A 0.33 watt  
B 12 watts  
C 36 watts  
D 48 watts



9 A **4.50-volt** personal stereo uses **1950 joules** of electrical energy in **one hour**. What is the **electrical resistance** of the personal stereo?

A 433  $\Omega$   
B 96.3  $\Omega$   
C 37.4  $\Omega$   
D 0.623  $\Omega$



10 Which quantity of **excess electric charge** could be found on an object?

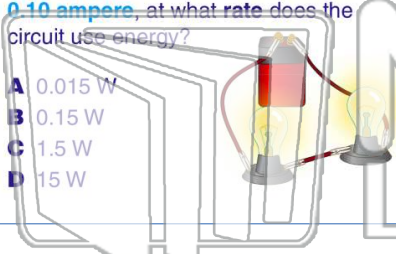
A  $6.25 \times 10^{-19} \text{ C}$   
B  $4.80 \times 10^{-19} \text{ C}$   
C 6.25 elementary charges  
D 1.60 elementary charges



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

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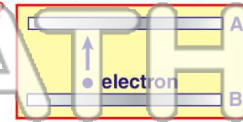
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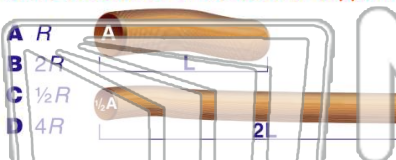
**PREVIEW**

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7

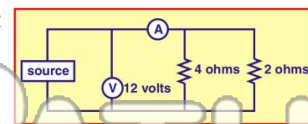
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8

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9 A **4.50-volt** personal stereo uses **1950 joules** of electrical energy in **one hour**. What is the **electrical resistance** of the personal stereo?

- A 433  $\Omega$
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- C 37.4  $\Omega$
- D 0.623  $\Omega$



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