



Name _____ Class _____ Date _____

1 A balloon is rubbed against a student's hair and then touched to a wall. The balloon "sticks" to the wall due to

- A electrostatic forces between the particles of the balloon
- B magnetic forces between the particles of the wall
- C electrostatic forces between the particles of the balloon and the particles of the wall
- D magnetic forces between the particles of the balloon and the particles of the wall



3 The resistance of a 60-watt light bulb operated at 120 volts is approximately

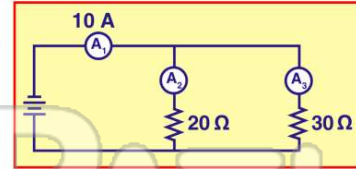
- A 720 Ω
- B 240 Ω
- C 120 Ω
- D 60 Ω



2 In the circuit diagram shown below, ammeter A_1 reads 10 amperes.

What is the reading of ammeter A_2 ?

- A 6.0 A
- B 10 A
- C 20 A
- D 4.0 A



4 An immersion heater has a resistance of 5.0 ohms while drawing a current of 3.0 amperes. How much electrical energy is delivered to the heater during 200 seconds of operation?

- A 3.0×10^3 J
- B 6.0×10^3 J

5



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7

- B 15.2 mA
- C 335 mA
- D 1650 mA

- A aluminum
- B copper
- C gold
- D nichrome

9

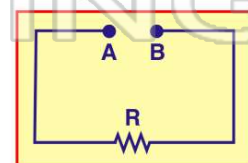
How much electrical energy is required to move a 4.00-microcoulomb charge through a potential difference of 36.0 volts?

- A 9.00×10^6 J
- B 144 J
- C 1.44×10^{-4} J
- D 1.11×10^{-7} J

10

What must be inserted between points A and B to establish a steady electric current in the incomplete circuit represented in the diagram below?

- A switch
- B voltmeter
- C magnetic field source
- D source of potential difference





ANSWER KEY

A balloon is rubbed against a student's hair and then touched to a wall. The balloon "sticks" to the wall due to

- A electrostatic forces between the particles of the balloon
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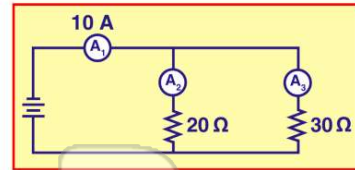


(C)

In the circuit diagram shown below, ammeter A_1 reads 10 amperes.

What is the reading of ammeter A_2 ?

- A 6.0 A
- B 10 A
- C 20 A
- D 4.0 A



(a)

The **resistance** of a 60-watt light bulb operated at 120 volts is approximately

- A 720 Ω
- B 240 Ω
- C 120 Ω
- D 60 Ω



(b)

An immersion heater has a **resistance** of 5.0 ohms while drawing a current of 3.0 amperes. How much **electrical energy** is delivered to the heater during 200 seconds of operation?

- A 3.0×10^3 J
- B 6.0×10^3 J
- C 9.0×10^3 J

(c)



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- C 335 mA
- D 1650 mA

- A aluminium
- B copper
- C gold
- D nichrome

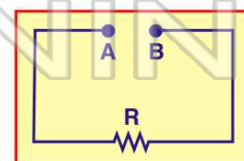
How much **electrical energy** is required to move a 4.00-microcoulomb charge through a **potential difference** of 36.0 volts?

- A 9.00×10^6 J
- B 144 J
- C 1.44×10^{-4} J
- D 1.11×10^{-7} J

(C)

What must be inserted between points **A** and **B** to establish a **steady electric current** in the incomplete circuit represented in the diagram below?

- A switch
- B voltmeter
- C magnetic field source
- D source of potential difference



(d)