



Name _____ Class _____ Date _____

1 Moving **2.0 coulombs of charge** a distance of **6.0 meters** from point *A* to point *B* within an electric field requires a **5.0-newton force**. What is the **electric potential difference** between points *A* and *B*?

- A 60 V
- B 30 V
- C 15 V
- D 2.5 V

2 A metal sphere having an **excess of +5 elementary charges** has a **net electric charge** of

- A 1.6×10^{-19} C
- B 8.0×10^{-19} C
- C 5.0×100 C
- D 3.2×019 C



3 A lightning bolt transfers **6.0 coulombs** of charge from a cloud to the ground in **2.0×10^{-3} second**. What is the **average current** during this event?

- A 1.2×10^{-2} A
- B 3.0×10^2 A



4 The graph below shows the relationship between the **work done** on a charged body in an electric field and the **net charge** on the body.

What does the **slope** of this graph represent?

- A power
- B potential difference
- C force

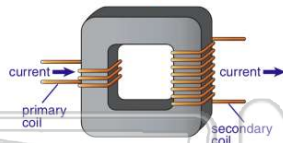


PREVIEW

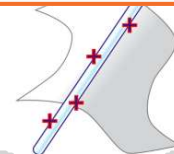
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7 A transformer has a primary coil with 100 turns and a secondary coil with 200 turns. The primary coil is connected to a 10 V AC source. What is the power rating of the secondary coil?

- A 10 W
- B 20 W
- C 80 W
- D 160 W



- A gains electrons
- B gains protons
- C loses electrons
- D loses protons



9 How much time is required for an operating **100-watt** light bulb to **dissipate 10 joules** of electrical energy?

- A 1 s
- B 0.1 s
- C 10 s
- D 1000 s



10 An electrostatic force of **20 newtons** is exerted on a charge of **8.0×10^{-2} coulomb** at point *P* in an electric field. The **magnitude** of the electric field intensity at *P* is

- A 4.0×10^{-3} N/C
- B 1.6 N/C
- C 20 N/C
- D 2.5×10^2 N/C



ANSWER KEY

Moving **2.0 coulombs of charge** a distance of **6.0 meters** from point A to point B within an electric field requires a **5.0-newton force**. What is the **electric potential difference** between points A and B?

- A 60 V
- B 30 V
- C 15 V
- D 2.5 V

(C)

A metal sphere having an **excess of +5 elementary charges** has a **net electric charge** of

- A 1.6×10^{-19} C
- B 8.0×10^{-19} C
- C 5.0×100 C
- D 3.2×019 C



(b)

A lightning bolt transfers **6.0 coulombs of charge** from a cloud to the ground in **2.0×10^{-3} second**. What is the **average current** during this event?

- A 1.2×10^{-2} A
- B 3.0×10^2 A
- C 3.0×10^3 A

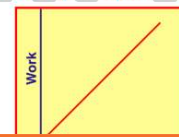


(C)

The graph below shows the relationship between the **work done** on a charged body in an electric field and the **net charge** on the body.

What does the **slope** of this graph represent?

- A power
- B potential difference
- C force
- D electric field intensity



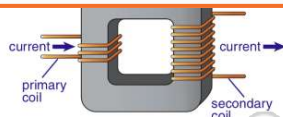
(b)



PREVIEW

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- A 10 W
- B 20 W
- C 80 W
- D 160 W



- B gains protons
- C loses electrons
- D loses protons



How much time is required for an operating **100-watt** light bulb to **dissipate 10 joules of electrical energy**?

- A 1 s
- B 0.1 s
- C 10 s
- D 1000 s



(b)

An electrostatic force of **20 newtons** is exerted on a charge of **8.0×10^{-2} coulomb** at point P in an electric field. What is the **magnitude of the electric field intensity at P**?

- A 4.0×10^{-3} N/C
- B 1.6 N/C
- C 20 N/C
- D 2.5×10^2 N/C

(d)