Electricity & Electrical Energy
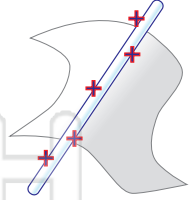
Name _____ Class _____ Date _____

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?
Circle the answer.
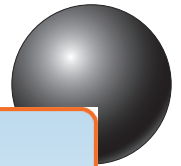
  2.5 V   15 V   30 V   60 V

2 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?
Circle the answer letter.

3 F
A
w
ir
is
d
s
b

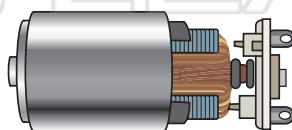**4** While operating at **120 volts**, an electric toaster has a resistance of **15 ohms**. The **power used** by the toaster

is _____ W.

5 Which device **converts** electrical energy into **mechanical energy**?

  a. motor
  b. generator
  c. thermocouple

6 A glass rod becomes positively charged when it is rubbed with silk. This **net positive** charge accumulates because the **glass rod** _____.

  a. gains electrons
  b. loses electrons
  c. gains protons

7 What is the **net static electric charge** on a metal sphere having an **excess of +3 elementary charges**?

  a. 1.60×10^{-19} C
  b.

aws
s a

00 J

gy used
ting for

  b. 9.0×10^3 J
  c. 5.4×10^5 J

10 An electric iron operating at **120 volts** draws **10 amperes** of current. How much **heat energy** is delivered by the iron in **30 seconds**?

  a. 1.2×10^3 J
  b. 3.6×10^4 J
  c. 3.0×10^2 J

PREVIEW

Please **Sign In** or **Sign Up** to download the printable version of this worksheet
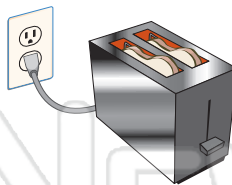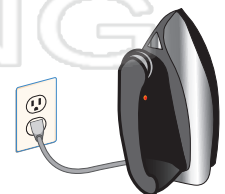
Electricity & Electrical Energy - Answer Key

Name _____ Class _____ Date _____

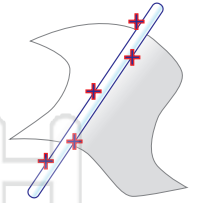**1** Moving 2.0 coulombs of charge a distance of 6.0 meters from point A to point B within an electric field requires a 5.0-newton force. What is the electric potential difference between points A and B?
Circle the answer.

2.5 V   (15 V)   30 V   60 V

2 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?
Circle the answer letter.

a.
b.
c.

3 F
A
w
ir
is
d
s

b

4 While operating at 120 volts, an electric toaster has a resistance of 15 ohms. The power used by the toaster is ____960____ W.

5 Which device converts electrical energy into mechanical energy?

(a.) motor
b. generator
c. thermocouple

6 A glass rod becomes positively charged when it is rubbed with silk. This net positive charge accumulates because the glass rod _____.

a. gains electrons
(b.) loses electrons
c. gains protons

7 What is the net static electric charge on a metal sphere having an excess of +3 elementary charges?

a. 1.60×10^{-19} C
b.

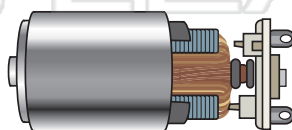...aws
...s a

...00 J

...gy used
...ting for

b. 9.0×10^3 J
(c.) 5.4×10^5 J

10 An electric iron operating at 120 volts draws 10 amperes of current. How much heat energy is delivered by the iron in 30 seconds?

a. 1.2×10^3 J
(b.) 3.6×10^4 J
c. 3.0×10^2 J