Name: _____

1. A toaster dissipates 1500 watts of power in 90. seconds. The amount of electric energy used by the toaster is approximately
   1. 1.4×10^5 J
   2. 1.7×10^1 J
   3. 5.2×10^8 J
   4. 6.0×10^{-2} J
2. What is the approximate amount of electrical energy needed to operate a 1600-watt toaster for 60. seconds?
   1. 27 J
   2. 1500 J
   3. 1700 J
   4. 96000 J
3. While operating at 120 volts, an electric toaster has a resistance of 15 ohms. The power used by the toaster is
   1. 8.0 W
   2. 120 W
   3. 960 W
   4. 1,800 W
4. If the potential drop across an operating 300.-watt floodlight is 120 volts, what is the current through the floodlight?
   1. 0.40 A
   2. 2.5 A
   3. 7.5 A
   4. 4.8 A
5. An electric motor draws 150 amperes of current while operating at 240 volts. What is the power rating of this motor?
   1. 1.6 W
   2. 3.8×10^2 W
   3. 3.6×10^4 W
   4. 5.4×10^6 W

6. An operating 75-watt lamp is connected to a 120-volt outlet. How much electrical energy is used by the lamp in 60. minutes (3600 seconds)?
   1. 4.5×10^3 J
   2. 2.7×10^5 J
   3. 5.4×10^5 J
   4. 3.2×10^7 J
7. A light bulb operating at 120 volts draws a current of 0.50 ampere for 240 seconds. The power rating of the light bulb is
   1. 30. W
   2. 60. W
   3. 75 W
   4. 120 W
8. The energy required to move one elementary charge through a potential difference of 5.0 volts is
   1. 8.0 J
   2. 5.0 J
   3. 8.0×10^{-19} J
   4. 1.6×10^{-19} J

9. An operating electric heater draws a current of 10. amperes and has a resistance of 12 ohms. How much energy does the heater use in 60. seconds?
   1. 120 J
   2. 1200 J
   3. 7200 J
   4. 72,000 J

10. What is the total electrical energy used by a 1,500-watt hair dryer operating for 6.0 minutes?

1. 4.2 J
2. 250 J
3. 9.0×10^3 J
4. 5.4×10^5 J

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

1. 3.0×10^2J
2. 1.2×10^3 J
3. 3.6×10^3 J
4. 3.6×10^4 J

12. A device operating at a potential difference of 1.5 volts draws a current of 0.20 ampere. How much energy is used by the device in 60. seconds?

1. 4.5 J
2. 8.0 J
3. 12 J
4. 18 J

13. An electrical appliance draws 9.0 amperes of current when connected to a 120-volt source of potential difference. What is the total amount of power dissipated by this appliance?

1. 13 W
2. 110 W
3. 130 W
4. 1100 W

14. An electric drill operating at 120. volts draws a current of 3.00 amperes. What is the total amount of electrical energy used by the drill during 1.00 minute of operation?

1. 2.16×10^4 J
2. 2.40×10^3 J
3. 3.60×10^2 J
4. 4.00×10^1 J