

Practice Questions

$$\text{Power [Watts]} = \text{Current [Amperes]} \times \text{Voltage [Volts]}$$

$$P \text{ [W]} = I \text{ [A]} \times V \text{ [V]}$$

1. The current through a toaster connected to a 120 V source is 4 A. What power is dissipated by the toaster?
2. A current of 1 A flows through a light bulb when it is connected across a 100V source. What power is dissipated by the bulb?
3. A lamp draws 0.50A from a 120 V generator. How much power does the generator deliver?
4. A 10 V automobile battery is connected to an electric starter motor. The current through the motor is 210 A. What power does the motor use?
5. A 4000 W clothes dryer is connected to a 200 V circuit. How much current does the dryer draw?
6. A flashlight bulb is connected across a 3 V difference in potential. The current through the lamp is 2 A. What is the power rating of the lamp?
7. A 6 V battery delivers a 0.5 A current to an electric motor that is connected across its terminals. What power is consumed by the motor?
8. The current through a light bulb connected across the terminals of a 120 V outlet is 0.5 A. At what rate does the bulb convert electric energy to light?
9. A car battery causes a current of 2 A to flow through a lamp while 12 V is across it. What is the power used by the lamp?
10. What current flows through a 75 W light bulb connected to a 25 V outlet?
11. A lamp draws a current of 2 A when it is connected to a 150 V source. What is the power consumption of the lamp?
12. A 1000 W lamp is connected to a 200 V. How much current flows through the lamp?