

$$P = IV$$

$$E = P * \text{time}$$

$$1\text{kW} = 1,000 \text{ Watts}$$

$$\text{\$} = \text{Energy} * \text{Rate}$$

Bob runs one device which draws 15 amps and plugs into a 120 V outlet, for 36 hours a month, his power company charges a rate of \$0.10. Bob gets an electric bill for \$10.00.

Was his bill too high or low? By how much?

$$I = 15$$

$$V = 120$$

$$t = 36$$

$$\text{Rate} = 0.10$$

$$\text{\$} = 10.00$$

Save for
Comparison

$$\textcircled{1} P = IV$$

$$(15)(120)$$

$$P = 1,800 \text{ W}$$

$$P = 1.8 \text{ kW}$$

$\div 1000$

$$\textcircled{2} E = P \cdot t$$

$$= (1.8)(36)$$

$$E = 64.8 \text{ kWh}$$

$$\textcircled{3} \text{\$} = E \cdot \text{Rate}$$

$$(64.8)(.10)$$

$$\text{\$} = 6.48$$

$$\textcircled{4} \begin{array}{r} 10.00 \\ - 6.48 \\ \hline \end{array}$$

$$\text{\$} 3.52$$