

Engineering MB Requirement 6b Example

$$\text{volts} := 230 \text{ V}$$

$$\text{amps} := 17 \text{ A}$$

$$\text{watts} := \text{volts} \cdot \text{amps} = (3.91 \cdot 10^3) \text{ W}$$

$$\text{time} := 500 \text{ hr}$$

$$\text{watts} \cdot \text{time} \cdot \frac{1 \text{ kW}}{1000 \text{ W}} = (1.955 \cdot 10^3) \text{ kW} \cdot \text{hr}$$

$$\text{rate} := \frac{.1079}{1 \cdot \text{kW} \cdot \text{hr}} \text{ dollars/kW-hr}$$

$$\text{cost} := \text{watts} \cdot \text{time} \cdot \text{rate} = 210.945 \text{ dollars}$$

Notes on the above example:

volts will come from item tag

amps may be on tag

watts, if on tag, may be used directly or volts will need to be multiplied by amps to get watts

watts x time x 1/1000 converts to kw-hours

you can use \$0.1079/kW-hr for your calculations