

The Cost of Electrical Energy Problems

1. Calculate the cost of using a 100 W incandescent light bulb for one year. The light bulb is on 5 h per day. The electricity rate is 10 cents/kWh or \$0.10/kWh.

Given: P = _____ W = _____ kW
 t = _____ h per day = _____ h per year
 electricity rate = \$_____ / kWh

What are we required to find? _____

Solution:

a) Which equation will we use?	
b) Substitute given info into equation (with units).	
c) Calculate. Give answer with units.	

Concluding statement:

2. Calculate the cost of using a 27 W fluorescent light bulb (which is just as bright as a 100 W incandescent light bulb) for one year. The light bulb is on 5 h per day. The electricity rate is 10 cents/kWh or \$0.10/kWh.

Given: P = _____ W = _____ kW
 t = _____ h per day = _____ h per year
 electricity rate = \$_____ / kWh

What are we required to find? _____

Solution:

a) Which equation will we use?	
b) Substitute given info into equation (with units).	
c) Calculate. Give answer with units.	

Concluding statement:

