Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

**Measuring Electricity**

*Directions: Fill in the blanks in the tables below*.

Table 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Voltage** | **=** | **Current** | **X** | **Resistance** |
| 1.5 V | = | \_\_\_\_\_ A | X | 3 Ω |
| \_\_\_\_\_ V | = | 3 A | X | 4 Ω |
| 120 V | = | 4 A | X | \_\_\_\_\_ Ω |
| 240 V | = | \_\_\_\_\_ A | X | 12 Ω |

Table 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Power** | **=** | **Voltage** | **X** | **Current** |
| 27 W | = | 9 V | X | \_\_\_\_\_A |
| \_\_\_\_\_ W | = | 120 V | X | 1.5A |
| 45 W | = | \_\_\_\_\_ V | X | 3 A |
| \_\_\_\_\_ W | = | 120 V | X | 2 A |

*Using a Watt meter, find the power usage of 5 appliances then complete the following chart*.

Table 3

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Appliance** |  | **Power** | **=** | **Voltage** | **X** | **Current** |
|  |  |  | = | 120 V | X | \_\_\_\_\_A |
|  |  |  | = | 120 V | X |  \_\_\_\_\_A |
|  |  |  | = | 120 V | X | \_\_\_\_\_ A |
|  |  |  | = | 120 V |  | \_\_\_\_\_ A |
|  |  |  | = | 120 V | X | \_\_\_\_\_ A |

*Calculate Cost*

Table 4

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Power** | **X** | **Time** | **=** | **Electrical Energy (kWh)** | **X** | **Price** | **=** | **Cost** |
| 5 kW | X | 100 hrs | = | \_\_\_\_\_kWh | X | $0.11 | = | $ \_\_\_\_\_ |
| 25 kW | X | 4 hrs | = | \_\_\_\_\_ kWh | X | $0.11 | = | $ \_\_\_\_\_ |
| 1000 W | X | 1 hr | = | \_\_\_\_\_ kWh | X | $0.11 | = | $ \_\_\_\_\_ |
| 30 kWh | X | 24 hr | = | \_\_\_\_\_ kWh | X | $0.11 | = | $ \_\_\_\_\_ |

 ****

Name \_\_\_\_\_Answer Key \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 

**Measuring Electricity**

*Directions: Fill in the blanks in the tables below*.

Table 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Voltage** | **=** | **Current** | **X** | **Resistance** |
| 1.5 V | = | 0.5 A | X | 3 Ω |
| 12V V | = | 3 A | X | 4 Ω |
| 120 V | = | 4 A | X | 30 Ω |
| 240 V | = |  20A | X | 12 Ω |

Table 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Power** | **=** | **Voltage** | **X** | **Current** |
| 27 W | = | 9 V | X | 3 A |
| 180 W | = | 120 V | X | 1.5A |
| 45 W | = | 15 V | X | 3 A |
|  240 W | = | 120 V | X | 2 A |

*Using a Watt meter, find the power usage of 5 appliances then complete the following chart*.

Table 3 Answers depend on Appliance measured.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Appliance** |  | **Power** | **=** | **Voltage** | **X** | **Current** |
|  |  |  | = | 120 V | X | \_\_\_\_\_A |
|  |  |  | = | 120 V | X |  \_\_\_\_\_A |
|  |  |  | = | 120 V | X | \_\_\_\_\_ A |
|  |  |  | = | 120 V |  | \_\_\_\_\_ A |
|  |  |  | = | 120 V | X | \_\_\_\_\_ A |

*Calculate Cost*

Table 4

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Power** | **X** | **Time** | **=** | **Electrical Energy (kWh)** | **X** | **Price** | **=** | **Cost** |
| 5 kW | X | 100 hrs | = | 500 kWh | X | $0.11 | = | $ 60.00 |
| 25 kW | X | 4 hrs | = | 100 kWh | X | $0.11 | = | $11.00 |
| 1000 W | X | 1 hr | = | 1 kWh | X | $0.11 | = | $ 0.11 |
| 15 kWh | X | 24 hr | = | 360 kWh | X | $0.11 | = | $ 39.60 |

 ****