## Electric Circuits Auxilliary Items

## For Voltage-Current-Resistance Lab

(Tape the following into your Data section and complete.)

## Data:

Resistor \#1: $\mathrm{R}=$ $\qquad$ $\Omega \quad$ (based on color code)

| $\#$ of <br> Batteries | $\Delta \mathrm{V}$ <br> (Volts | I <br> (Amps) |
| :---: | :---: | :---: |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |



Resistor \#2: $\mathrm{R}=$ $\qquad$ $\Omega \quad$ (based on color code)

| $\#$ of <br> Batteries | $\Delta \mathrm{V}$ <br> (Volts | I <br> (Amps) |
| :---: | :---: | :---: |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |


$\mathbf{m}=$ $\qquad$ $\mathbf{b}=$ $\qquad$ $\mathbf{R}=$ $\qquad$

For Energy Audit Activity
(Tape the following into your Data section and complete.)
Data:

| Electrical Device | $\begin{gathered} \text { Time }^{*} \\ \text { (h) } \end{gathered}$ | Power (W) | or Current <br> (A) | Energy (kW•h) | Cost** (\$) |
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* Estimated weekly time for the entire household
** Calculated based on the cost of $\$ 0.15 / \mathrm{kW} \bullet \mathrm{h}$

Data:

| Electrical Device | $\begin{gathered} \text { Time }^{*} \\ \text { (h) } \end{gathered}$ | Power or Current <br> (W) (A) |  | Energy <br> (kW•h) | $\begin{gathered} \hline \text { Cost }^{* *} \\ (\$) \end{gathered}$ |
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* Estimated weekly time for the entire household
** Calculated based on the cost of $\$ 0.15 / \mathrm{kW} \bullet \mathrm{h}$


## For Combination Circuits Lab

(Tape the following into your Data section and complete.)
Data:


|  | Measured Current <br> (A) | $\begin{gathered} \hline \text { Measure } \\ \Delta V \\ (\mathrm{~V}) \\ \hline \end{gathered}$ | Calculated Resistance ( $\Omega$ ) | Theoretical Resistance ( $\Omega$ ) -color bands- | Percent Error |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{R}_{1}$ |  |  | $\Delta \mathrm{V} / \mathrm{I}=$ |  |  |
| R2 |  |  | $\Delta \mathrm{V} / \mathrm{I}=$ |  |  |
| R3 |  |  | $\Delta \mathrm{V} / \mathrm{I}=$ |  |  |
| R4 |  |  | $\Delta \mathrm{V} / \mathrm{I}=$ |  |  |
| $\begin{gathered} \text { Total } \\ \text { (Battery } \\ \text { ) } \end{gathered}$ |  |  | $\Delta \mathrm{V}_{\text {tot }} / \mathrm{I}_{\text {tot }}=$ | $\begin{aligned} & \text { Req }= \\ & \text { (use eq'n) } \end{aligned}$ |  |

Clearly show your calculations for the resistance (in cells) and the percent error (using calculated and theoretical resistance values) for each of the four resistors.

