

Lab 1 Grading Standard:

- *In grading, do not explicitly assign points to the various sections. Rather, take points off for incorrect, incomplete or missing items.*
- *When you take point off, be sure to write a short comment as to why the points were lost.*
- *Example: (-1) What is the measured value of the component?
(-3) What is the mathematical formula that you are
○ plotting on top of your data?*

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|---|----|
| Pre-lab Signature: | 10 |
| Purpose/Introduction | 5 |
| Passive Elements I-V Curves | |
| Procedure with Circuit | 5 |
| Data per element 2/ | 10 |
| Plots: I-V Curves | 10 |
| Power Curves | |
| 1k-Ohm, 47 Ohm, Zener, LEDs, Lightbulb | |
| Active Element I-V Curves | |
| Procedure with Circuits | 5 |
| Battery Data + Plot + Comments on curve | 10 |
| Current Source Data + Plot + Comments on Curve | 10 |
| Voltage Divider Data + Plot – how does curve compare to the expected curve? | 10 |
| The R-2-R Ladder | |
| Procedure with Circuit | 5 |
| Building circuit with measured resistances and expected values. | 5 |
| Determine V_{th} and R_{th} for the ladder. | 5 |
| Practical determination of V_{th} and R_{th} | 5 |
| Conclusion/Summary | 5 |

General Notes:

- The axis of all plots must be labeled. This should include the quantity, the units and numerical values.
 - The boxed questions should be answered in the lab book.
 - Procedures must have a circuit diagram.
 - Measured values of components used should be recorded in the lab book.
- Missing units on components, plot axes, tables ... (-1 per occurrence).
Missing plot (-4 per occurrence).
Missing axes labels on plots (-1 per label).
Missing column labels on tables (-1 per label).
No fit to linear curves (-2 per occurrence).
No fit values with units (-2 per occurrence).
No comparison of fit values with expectations when possible (-2 per occurrence).
Missing theoretical calculations when expected (-3 per occurrence).