Lab 2 Notes February 12, 2020

- When making semilog or log-log plots, use semilogx or semilogy or loglog. Do NOT use plot(log(x), y), plot(x, log(y)), or plot(log(x), log(y)). Label your axes w/ units that make sense for the tick labels
  - Can also use log10 for labels to be decades (10^{-6} for example)
- For your diode V/I characteristic, you want the currents equally spaced on a log scale.
  Use logspace(log10(start), log10(end), num_points)
  - log10(-9) for nano or log10(-3) for micro
- To avoid dynamic artifacts at low current levels, start your sweeps at high current levels and end at low current levels. You can use fliplr to reverse a row vector
  - Small currents used to charge up capacitance of wires
- When fitting an exponential curve to your measured data fit a straight line to the log(current) vs voltage rather than fitting an exponential to current vs voltage. (If you do the latter, the fit will only be good for the top order of magnitude or so.)

- Your resistor values should be like 499 Ω, 4.99 kΩ, 49.9 kΩ or 200 Ω, 2.00 kΩ, 20.0 kΩ, etc.

- Think about your sweeps to avoid wasting time measuring currents too small for the SMU or beyond it's 20 mA upper limit!