Voltage Divider - Craig Coleman - Edited 250626

Prerequisites:
- Resistor lab (calculate color code and measure ohms). At least 5 different resistors.
- Series resistor lab. At least 5 different circuits. Do the math. Simple addition.
- Parallel resistor lab. At least 5 different circuits. Do the math. Parallel resistor equation.

Objective:
- Learn and try to understand the equation for voltage divider.
- Calculate two example voltage dividers.
- Create four different voltage dividers and measure ohms of resistors and voltage (VDC).

Remember to:
- COPY THE FORMULA
- FILL IN THE GIVEN INFORMATION
- DO THE ALGEBRA
- LABEL THE SOLUTIONS

Materials:
- Multimeter with ohms and voltage
- Breadboard
- 22 AWG Solid Wire
- Wire cutters
- 9V battery
- 9V battery holder

Procedure:
- Watch the Khan Academy posted at: https://wa-appliedmath.org/files/ELECTRICAL/
- Take notes for 5VDC to 3.3VDC voltage divider.
- Take notes for 9VDC to ___ voltage divider.
- Create a 9VDC with R1 = 510 Ohm and R2 = 1000 Ohm voltage divider.
- Do the math on the 9VDC with R1 = 510 Ohm and R2 = 1000 Ohm voltage divider.
- Measure and document voltage on 9VDC with R1 = 510 Ohm and R2 = 1000 Ohm voltage divider.
- Create 3 more voltage dividers and document circuit with calculated and measured voltage and resistance.

Input voltage V_{in} is applied to the top and bottom of the series resistors.

Output voltage V_{out} is measured from the central node to t bottom of resistor $R2$.