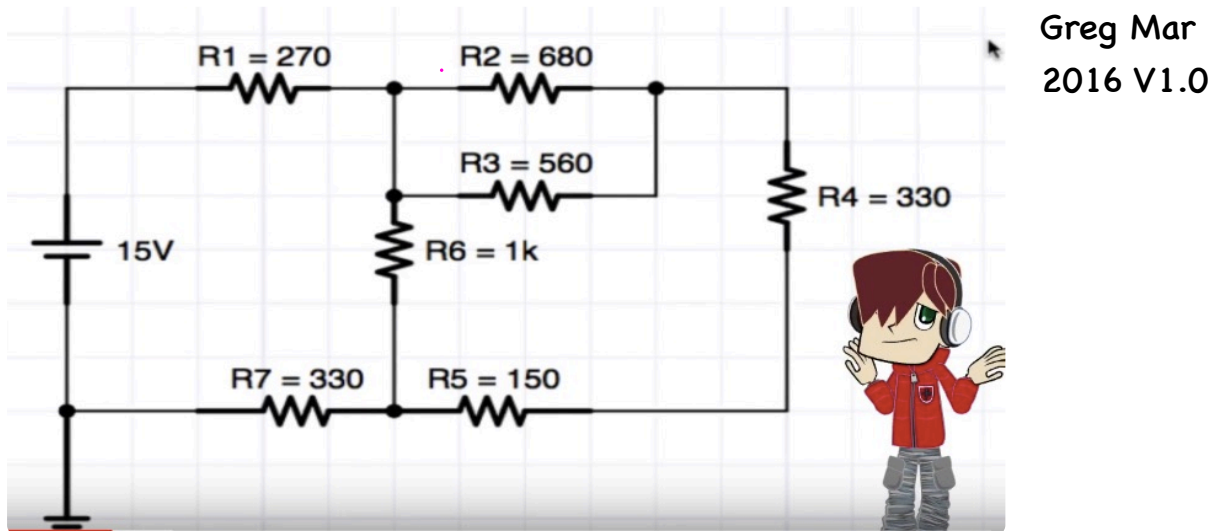
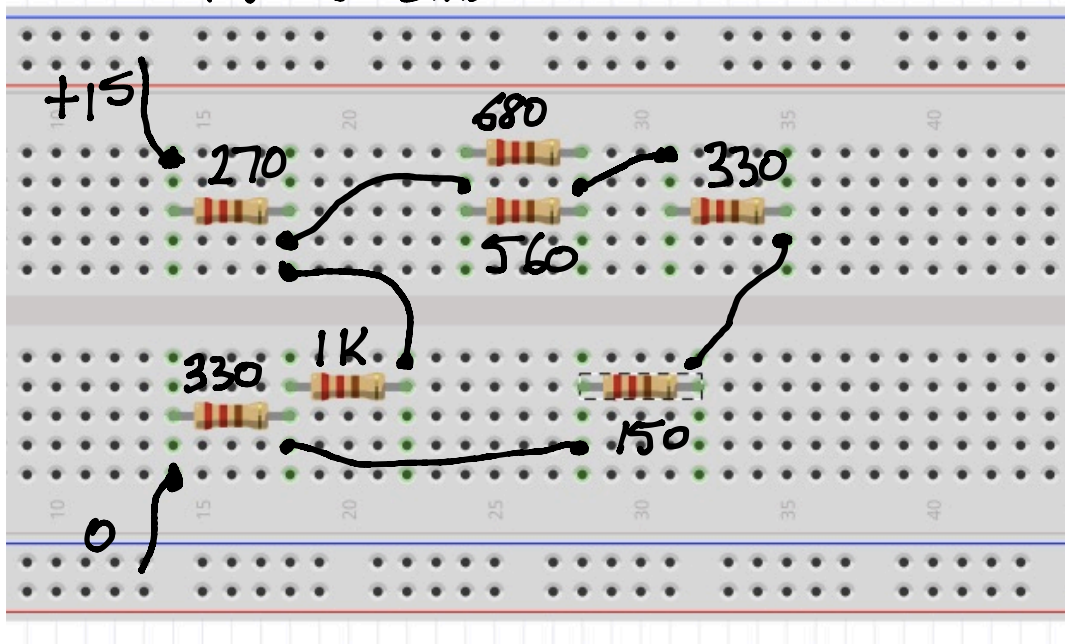


Series Parallel LAB week 5 [see Video]

STUDY THE CIRCUIT FROM MY YOUTUBE VIDEO



The breadboard wiring diagram is shown below. Please follow this & check it against the schematic



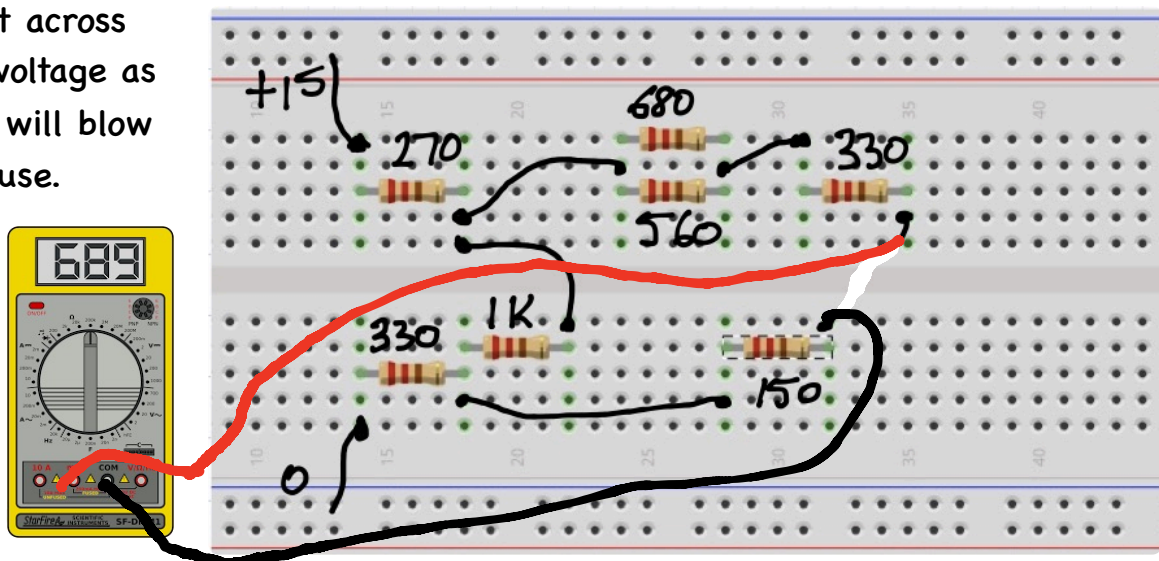
1. Construct the circuit shown above. Don't be lazy, as I have told you before, strip new wires to use in your circuit.

2. Take a few minutes to calculate all currents and voltage drops. Record your answers here in Table 1.

3. Apply power, 15V to your circuit. Use the DMM to measure voltage drops. Observe proper polarity. Record each voltage in Table 1 here.

4. Measure the current through each resistor and record each in Table 1. To do this, remove the appropriate jumper and insert your ammeter (DMM) in place of the jumper. Observe proper polarity and be careful to use the DMM on the proper range and do NOT put it across any voltage as that will blow it's fuse.

Parameter	Calculated Values	Measured Values
Vr1		
Vr2		
Vr3		
Vr4		
Vr5		
Vr6		
Vr7		
Ir1		
Ir2		
Ir3		
Ir4		
Ir5		
Ir6		
Ir7		



5. see the diagram on the previous page to break the wires between each resistor and measure the current with the DMM on the correct range. Picture demonstrates measuring the current to the 150ohm resistor.

6. Place a short circuit across R5 the 150 Ω resistor and complete the new table below. You will need to recalculate values and remeasure values.

Parameter (150ohm short circuited)	Calculated Values	Measured Values
Vr1		
Vr2		
Vr3		
Vr4		
Vr5		
Vr6		
Vr7		
Ir1		
Ir2		
Ir3		
Ir4		
Ir5		
Ir6		
Ir7		

Questions:

1. Which resistor currents are equal to the total circuit current
2. At which jumpers (wire links) could you measure total current?
3. Do the calculated values in your Table match the measured values? If they do not match, you have an error with your circuit or with your placement of resistors or with resistor values on your breadboard.
4. With the short circuit across R5, what impact did it have on overall circuit current and individual currents? Why?

5. List three important facts that you have observed regarding a short in an overall series parallel circuit.

- 1
- 2
- 3

6. Pack up your equipment when you have completed the Lab. Put the resistors back into the small