

AE-237 Week-2: Series Parallel Lab, part-2 (Show work on this or reverse side)

NAME _____ **DATE:** _____

1. Follow instructions on Parallel Lab Setup Sheet
2. Once the three LEDs are lit, remove and replace them with jumpers.
3. Confirm the voltage across each resistor is the same as the power source.
4. Draw the schematic. Label each component from L-to-R (B1, R1, R2, R3.)

5. Read the resistor color code and translate in the table below

Resistor	1st band	2nd band	multiplier	%	calculated	Measured Power off
1						
2						
3						

6. **Calculate** the three branch currents: I_1 _____ + I_2 _____ + I_3 _____

7. **Measure** the three branch currents: I_1 _____ + I_2 _____ + I_3 _____

8. Measure the total current: _____

9. Power dissipated by each resistor: $R_1 =$ _____ $R_2 =$ _____ $R_3 =$ _____

10. Calculate Equivalent Resistance: $(1/R_{total} = 1/R_1 + 1/R_2 + 1/R_3 + \text{etc}) =$ _____

11. Is the total resistance less than the smallest value resistor? _____

12. Calculate Total Current (using Equivalent Resistance) _____

13. Measure Total Current: _____

14. If 12 & 13 not the same, find your mistake(s).