AE-237 3-LED Lab

NAME:_____DATE:_____

1. Connect each of the LEDs – Red, Yellow and Green - in series with a resistor, just like the single LED lab. The goal is to get all three to light at approximately the same brightness.
2. Draw the schematic, label the parts and complete the each step as per the LED lab.

$V_{batt=FL}$	RED LED	YELLOW LED	GREEN LED	
LED Voltage	V_{red} =	V_{yel} =	V_{grn} =	
Resistor Voltage	V_{res} =	V_{res} =	V_{res} =	
Measured Resistance	R = Ω	R = Ω	R = Ω	↓ Total Current ↓
Calculated Current	$I_{red\text{-}calc}$ =	$I_{yel\text{-}calc}$ =	$I_{grn\text{-}calc}$ =	I_{calc} =
Measured Current	$I_{red\text{-}M}$ =	$I_{yel\text{-}M}$ =	$I_{grn\text{-}M}$ =	I_{M} =

	Band-1	Band-1	Band-1	Band-1	Calculated Ω	Measured Ω
LED_{red}						
LED_{yellow}						
LED_{green}						
Remove LED		Calculate	Parallel	Resistance	→→→→→	
Remove LED		Calculate	Parallel	Current	→→→→→	

NOTE: Parallel Current should equal total current

Parallel (equivalent) Resistance Formula

$$\frac{1}{R_{tot}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$\frac{1}{R_{tot}} = \frac{1}{\quad} + \frac{1}{\quad} + \frac{1}{\quad}$$

$$mho = \frac{}{\quad} + \frac{}{\quad} + \frac{}{\quad}$$

$$\frac{1}{mho} = \frac{}{\quad}$$