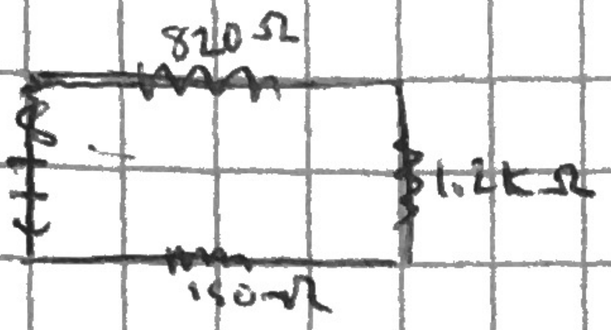
Activity

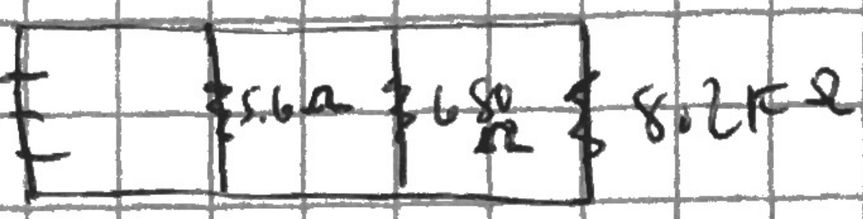
1. 3.5v/470Ω = 7.4mA

3.5v / 15.5μA .0000035 V / .0000155 A = .226Ω

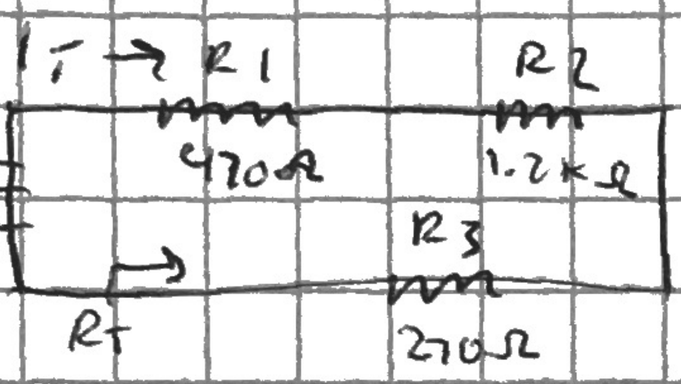
1.4mA • 22K .0014A • 22,000 = 30.8v

2. 


RT = 820 + 150 + 1200 = 2170Ω




RT = 5.6 + 680 + 8200 = 8885.6Ω

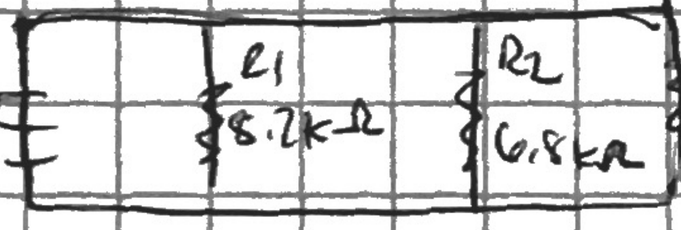
3. 


RT = 270 + 470 + 1200 V/R = I

RT = 1940Ω 9/1940 = 4.63mA

V1 = 4.63mA • 470 V2 = 4.63mA • 1200 V3 = 4.63mA • 270

V1 = 2.17v V2 = 5.56v V3 = 1.25v

4. 


RT = 8200 + 6800 + 4700 IT = V/R I = 12/19700

RT = 19.7kΩ I = .609mA

Conclusion

1. • Voltage / Resistance = Current (Series)
   • $R_T$ = Sum of individual resistance
   • $V_T$ = Sum of individual voltage drops

2. (parallel)
   • Components share same voltage
   • $I_T$ = sum of individual branch currents

3. A series because once one resistance is taken away the voltage will not go through the rest of the bulbs.

Jorge Marquez 2/3/16