Linear Circuits

SE3910 – Lab 2

Name: _____

Date: _____

Spring 2015

Milwaukee School of Engineering (MSOE)

Electrical Engineering and Computer Science (EECS)

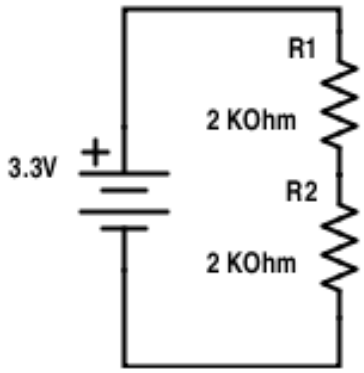
Instructor: Dr. Josiah Yoder

Introduction

Circuit 1

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



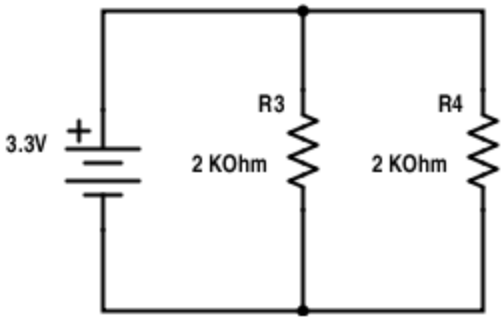
In Lab – Measure Voltage

Measured: R1: _____ R2: _____

Circuit 2

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



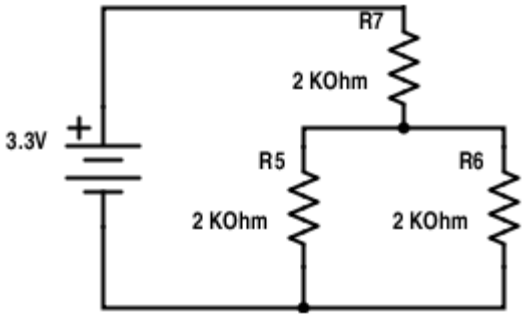
In Lab – Measure Voltage

Measured: R3: _____ R4: _____

Circuit 3

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



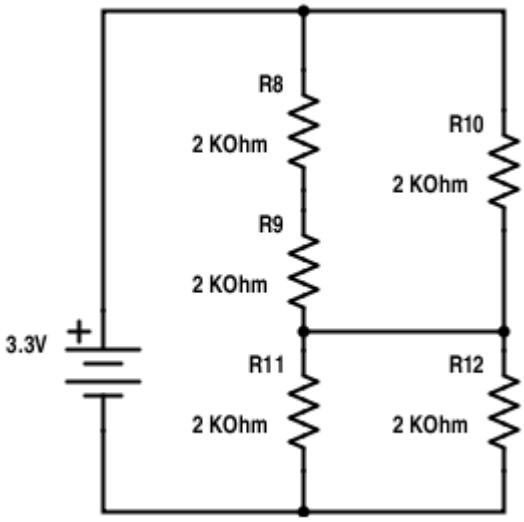
In Lab – Measure Voltage

Measured: R5: _____ R6: _____ R7: _____

Circuit 4

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



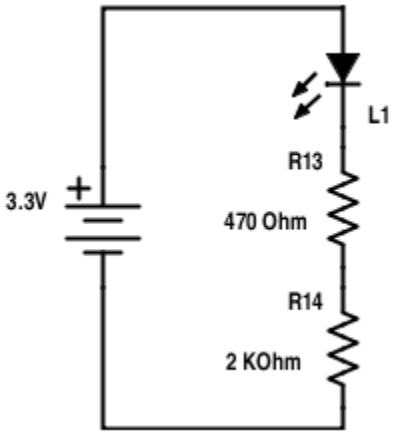
In Lab – Measure Voltage

Measured: R10: _____ R12: _____

Circuit 5

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



In Lab – Measure Voltage

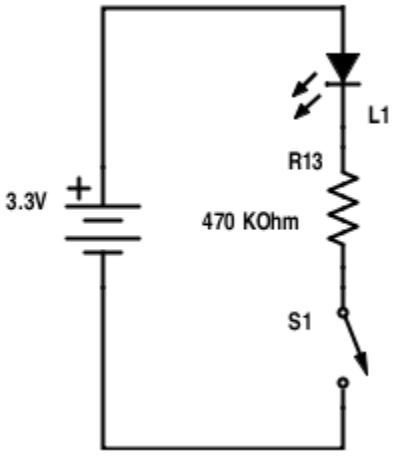
Measured: R14: _____ (EC: V needed for 20mA: _____

Please check with a full analysis that any voltages you apply will not damage the LED. You may also want to turn up the supply slowly.)

Circuit 6

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



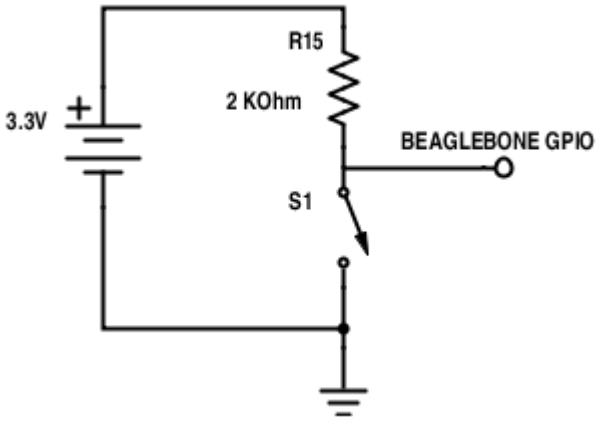
In Lab – Measure Voltage

Measured: S1 closed: _____ S1 open: _____

Circuit 7

Prelab – Analyze Circuit

Label the circuit below with the voltage across and current through each component. You may do the analysis on the side



In Lab – Measure Voltage

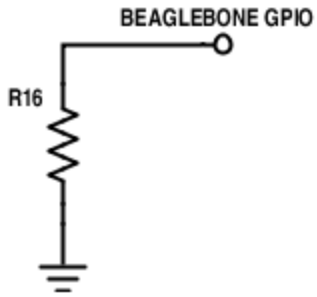
Measured: GPIO open: _____ GPIO closed: _____

Circuit 8

Prelab – Analyze Circuit

The minimum resistance for R16: _____

Show work and explain why this is a minimum resistance rather than a maximum resistance.



In Lab – Don't Confirm your predictions! ☺

(Nothing required)

In-Lab Observations

[You can write these on the previous pages if desired. You must write SOME in-lab observations, and you may wish to summarize them here. I do not expect you to fill this space.]

Analysis and Conclusions

[Write your explanations for observations here. I do not expect you to fill this space.]

Comments on the Lab, Positive or Negative [Required]