

**ENSC 220**  
**Fall 2017**  
**Lab 1**

Due: Sunday, October 1, 2017

Group members:

1. Name:

Student No.

--	--	--	--	--

--	--	--

2. Name:

Student No.

--	--	--	--	--

--	--	--

3. Name:

Student No.

--	--	--	--	--

--	--	--

Each Lab group submits one completed worksheet based on the instructions given in Lab 1.

# Lab 1: Verification of KVL and KCL Worksheet

DMM accuracy		
Voltage	Current	Resistance
<input type="text"/>	<input type="text"/>	<input type="text"/>

Resistor values				
	Nominal		Measured	
R1	<input type="text"/>	<input type="text"/>	±	<input type="text"/>
R2	<input type="text"/>	<input type="text"/>	±	<input type="text"/>
R3	<input type="text"/>	<input type="text"/>	±	<input type="text"/>

### KVL

Expected (based  
on measured  
resistance and  $V_{in}$ )

Measured

$V_{in}$   
(nominal)

$\pm$

$V_{R1}$

$\pm$

$V_{R2}$

$\pm$

### KCL

Expected (based  
on measured  
resistance and  $V_{in}$ )

Measured

$I_{R1}$

$\pm$

$I_{R2}$

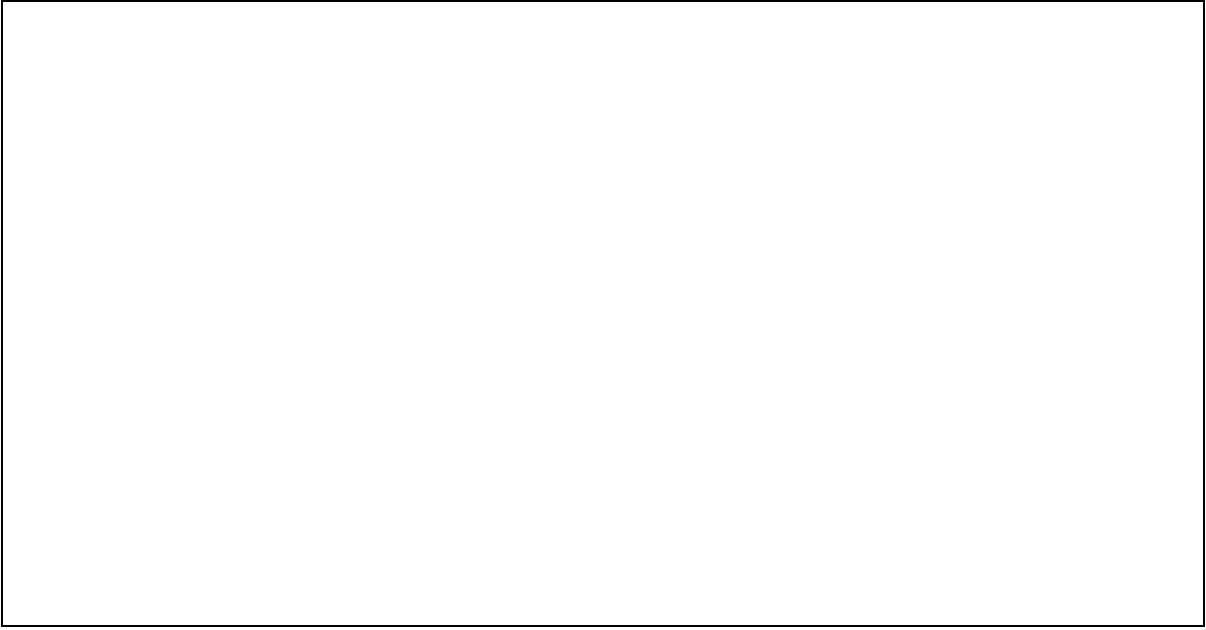
$\pm$

$I_{R3}$

$\pm$

## Discussion:

Show how equipment accuracy and measurement errors propagate through the expressions and affect the expected value of  $V_{R1}$ .



Explain how the measurement process affects the resistances, voltages, and currents that you are measuring (one or two sentences and/or a diagram).

