Lab 5: Voltage Divider

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March 5, 2021

Part 1

Table 1: Series Resistors						
R_1	R_2	V_1	V/DIV for V_1	V_{12}	$\frac{R_1}{R_1+R_2}$	$\frac{V_1}{V_{12}}$
1k	2k	0.68V	1V	2.02V	0.33k	0.34V
1k	100	1.82V	1V	1.98V	0.91k	0.92V
1k	4.7k	0.40V	1V	2.02V	0.18k	0.2V
1k	10k	0.28V	1V	2.02V	0.09k	0.14V
1k	100k	0V	0V	0V	0.01k	0

Picture 1:

Graph 1

Discussion 1

1. What did you expect to see, and did you see it? If not, why not. If so, how well (quantitatively) did it fit your expectation?

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Part 2

Table 2: Parallel Resistors									
R_1	R_2	R_3	V_1	V/DIV for V_1	$I_1 = I_{23}$	V_{123}	V_{23}	$R_{23,\text{expt}}$	$R_{23,\text{theory}}$
1k	2k	0	0	0	0	0	0	0	0
1k	100	0	0	0	0	0	0	0	0
1k	4.7k	0	0	0	0	0	0	0	0
1k	10k	0	0	0	0	0	0	0	0
1k	100k	0	0	0	0	0	0	0	0

Picture 2:

Graph 2

Discussion 2

1. What did you expect to see, and did you see it? If not, why not. If so, how well (quantitatively) did it fit your expectation?

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