Lab 9: RC Discharge

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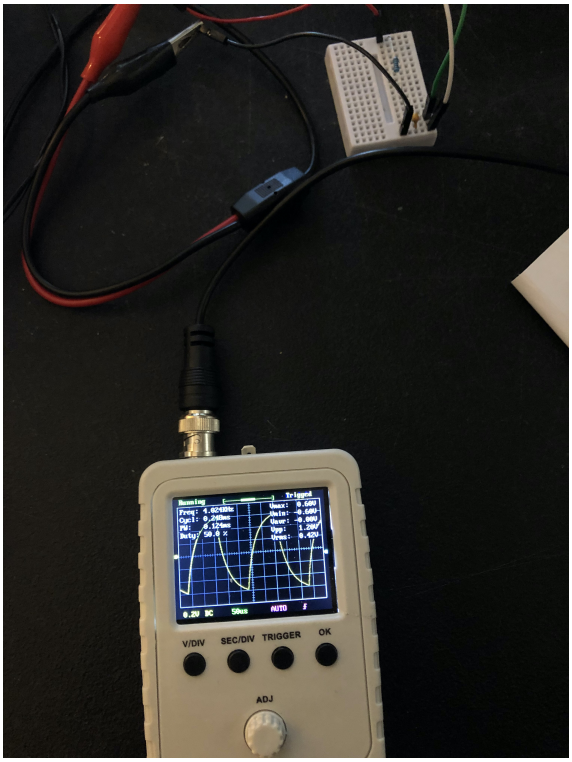
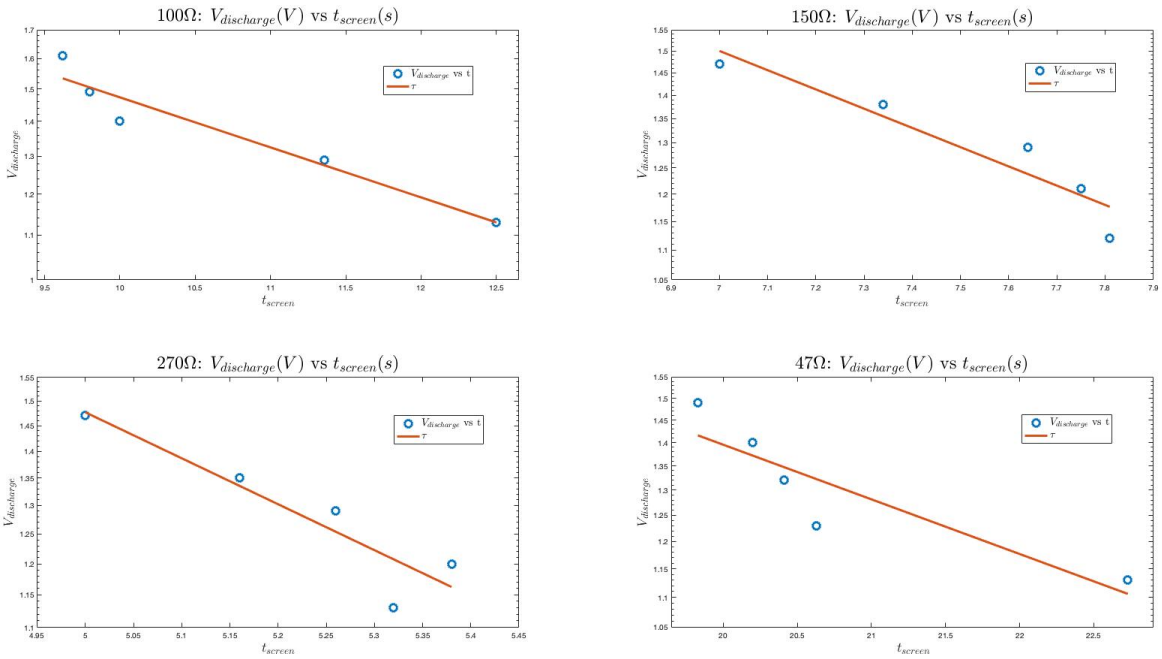
Table 1: Discharge

R	C	$f(Hz)$	$V_{min}(V)$	$t_{srn}(DIV)$	SEC/DIV	$t_{srn}(s)$	$V_{srn}(DIV)$	V/DIV	V_{srn} (V)	$V_{dischg}(V)$
100Ω	$0.22\mu F$	4.024kHz	0.067	±4.00	50us	12.50	±3.0	0.2V	1.20	1.13
100Ω	$0.22\mu F$	4.024kHz	0.065	±4.40	50us	11.36	±3.1	0.2V	1.36	1.29
100Ω	$0.22\mu F$	4.024kHz	0.061	±5.00	50us	10.00	±3.3	0.2V	1.46	1.40
100Ω	$0.22\mu F$	4.024kHz	0.050	±5.10	50us	9.80	±4.0	0.2V	1.54	1.49
100Ω	$0.22\mu F$	4.024kHz	0.048	±5.20	50us	9.62	±4.2	0.2V	1.66	1.61
150Ω	$0.22\mu F$	3.024kHz	0.067	±6.40	50us	7.81	±3.0	0.2V	1.19	1.12
150Ω	$0.22\mu F$	3.024kHz	0.065	±6.45	50us	7.75	±3.1	0.2V	1.27	1.21
150Ω	$0.22\mu F$	3.024kHz	0.063	±6.31	50us	7.64	±3.2	0.2V	1.35	1.29
150Ω	$0.22\mu F$	3.024kHz	0.058	±6.30	50us	7.34	±3.4	0.2V	1.44	1.38
150Ω	$0.22\mu F$	3.024kHz	0.050	±6.25	50us	6.00	±4.0	0.2V	1.52	1.47
270Ω	$0.22\mu F$	2.024kHz	0.067	±9.40	50us	5.42	±3.0	0.2V	1.20	1.13
270Ω	$0.22\mu F$	2.024kHz	0.065	±9.30	50us	5.38	±3.1	0.2V	1.26	1.20
270Ω	$0.22\mu F$	2.024kHz	0.063	±9.20	50us	5.26	±3.2	0.2V	1.35	1.29
270Ω	$0.22\mu F$	2.024kHz	0.059	±9.10	50us	5.16	±3.3	0.2V	1.41	1.35
270Ω	$0.22\mu F$	2.024kHz	0.050	±8.90	50us	5.00	±4.0	0.2V	1.52	1.47
47Ω	$0.22\mu F$	8.024kHz	0.067	±2.20	50us	22.73	±3.0	0.2V	1.20	1.13
47Ω	$0.22\mu F$	8.024kHz	0.063	±2.40	50us	20.63	±3.2	0.2V	1.29	1.23
47Ω	$0.22\mu F$	8.024kHz	0.061	±2.45	50us	20.41	±3.3	0.2V	1.38	1.32
47Ω	$0.22\mu F$	8.024kHz	0.059	±2.50	50us	20.20	±3.4	0.2V	1.46	1.40
47Ω	$0.22\mu F$	8.024kHz	0.050	±2.50	50us	19.83	±4.0	0.2V	1.54	1.49

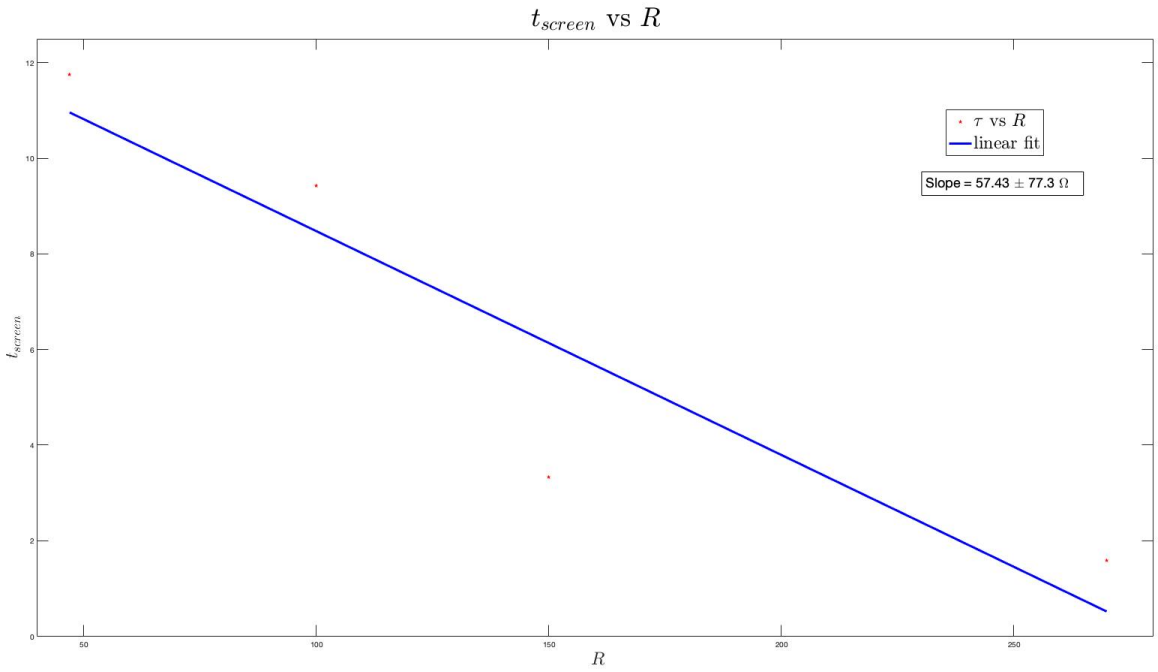
Setup



Graph 1



Graph 2



- What is the value of the slope in the second graph and how does that compare to what you expected?

  Slope = 57.43 ± 77.3 Ω. I expected it to be bad since Sebastian said it would.