

# PCT Lab Report 1

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## 1 Method

## 2 Results

### 2.1 RC Circuit

Table 1: Tabulated experimentally measured and calculated results. Note that  $\phi_r$  denotes the phase angle of  $V_r$  and  $\phi_c$  denotes the phase angle of  $V_c$ .

$V_r$	$V_c$	$I_p$	$R$	$\phi_r$ (radians)	$\phi_r$ (degrees)	$\phi_c$ (radians)	$\phi_c$ (degrees)
0	120.9	0.764	0.000	1.571	90.000	0.000	0.000
10	120.1	0.748	13.369	0.917	52.548	-0.654	-37.452
20	119.1	0.732	27.322	0.568	32.570	-1.002	-57.430
30	116.6	0.716	41.899	0.395	22.614	-1.176	-67.386
40	114.4	0.698	57.307	0.296	16.939	-1.275	-73.061
50	110.5	0.684	73.099	0.234	13.429	-1.336	-76.571
60	107.7	0.664	90.361	0.191	10.932	-1.380	-79.068
70	102.3	0.628	111.465	0.155	8.899	-1.415	-81.101
80	95.1	0.580	137.931	0.126	7.212	-1.445	-82.788
90	86.8	0.534	168.539	0.103	5.912	-1.468	-84.088
100	73.8	0.458	218.341	0.080	4.570	-1.491	-85.430
110	59.5	0.360	305.556	0.057	3.269	-1.514	-86.731

### 2.2 Loci of RC Circuit

### 2.3 RL Circuit

### 2.4 RLC Circuit

## 3 Discussion

## 4 Conclusion

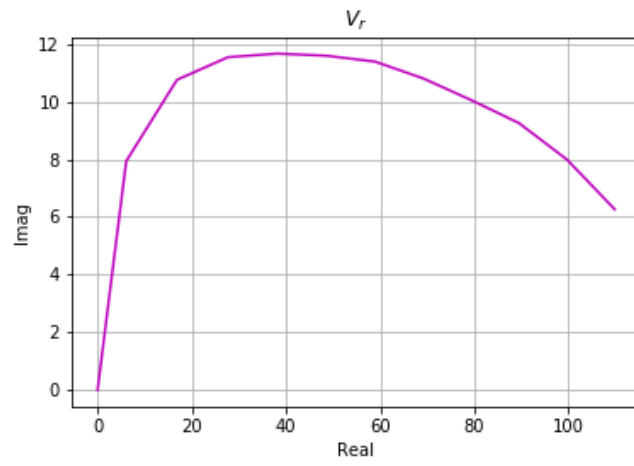


Figure 1: The locus of  $V_r$

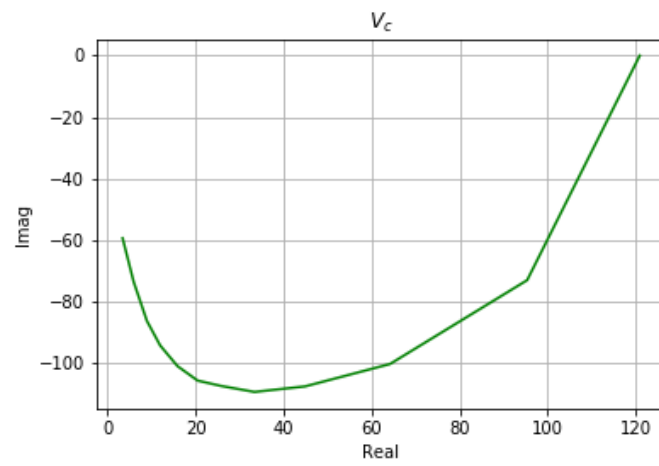


Figure 2: The locus of  $V_c$

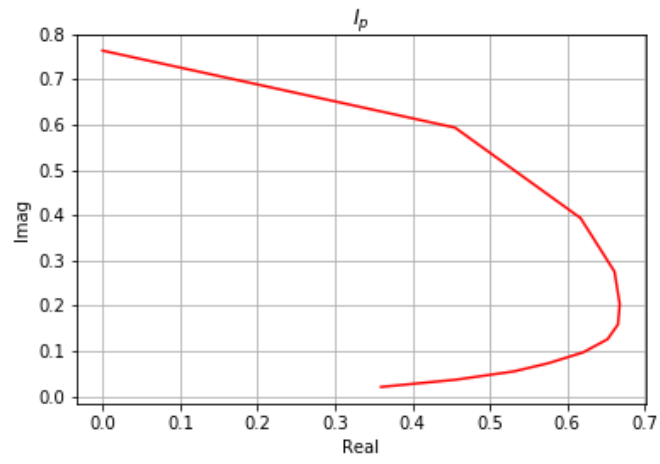


Figure 3: The locus of  $I_p$