Variable	Calculated value	Measured Value	Percent Difference
V_T	16.276 [V]	16.29 [V]	0.086 %
I_N	50.21 [mA]	49.31 [mA]	1.7925 %
R_T	324.178 Ω	330.35 Ω	1.9039 %
R_N	324.178 Ω	330.35 Ω	1.9039 %

Table 1: Lab 5 Comparisons

Nominal R_L	R_L	Calc. V_L	V_L	Calc. I_L	I_L	Calc. P_L	P_L
100Ω	98.2Ω	3.78708 [V]	3.3727 [V]	37.8708 [mA]	38.04 [mA]	143.420 [mW]	128.298 [mW]
1000Ω	985Ω	12.2478 [V]	12.23 [V]	12.2478 [mA]	12.1 [mA]	150.009 [mW]	147.983 [mW]

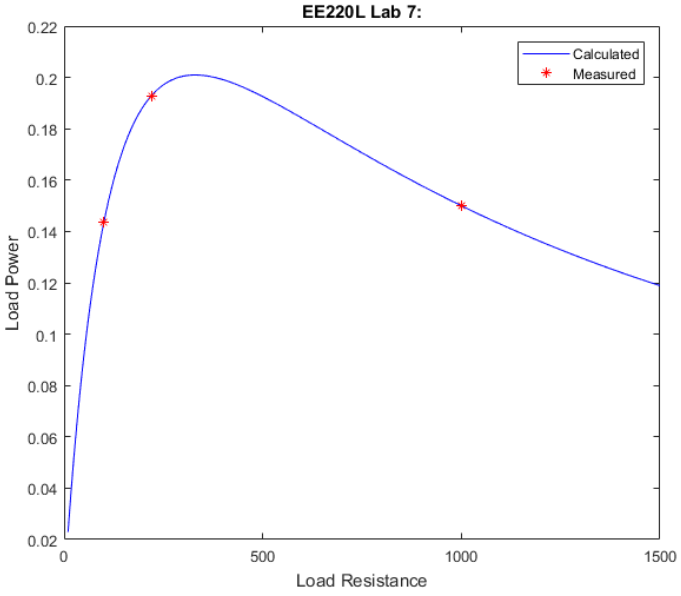

Figure 1: Power vs Resistance

Listing 1: MATLAB code for Lab 7 Circuits 1

```
% EE220L-002 Lab 7
% Marcus Hall
% Feb 21, 2019
%

%% 2d
Calc =[16.276,50.21,324.178,324.178];
measured =[16.29,49.31,330.35,330.35]

% percent differnce Calculations for 2d
pd = efficency(Calc,measured)
pd = pd'
measured'

%% Analsys %%
% This was used to find the power load of resitors
% in a Thevenin Circuit

% setting up the Power load function
R_L= 10:1:1500;
load_p = (16.292./(330.2+R_L)).^2 .*(R_L);
```

```
% creating the measured points
R_act = [100,220,1000];
load_p_act = (16.292./(330.2+R_act)).^2 .*(R_act);

% plotting the 2 power load functions
plot(R_L,load_p,'b',R_act,load_p_act,'*r')
ylabel('Load Power')
xlabel('Load Resistance')
legend('Calculated ','Measured')
title('EE220L Lab 7:')
```