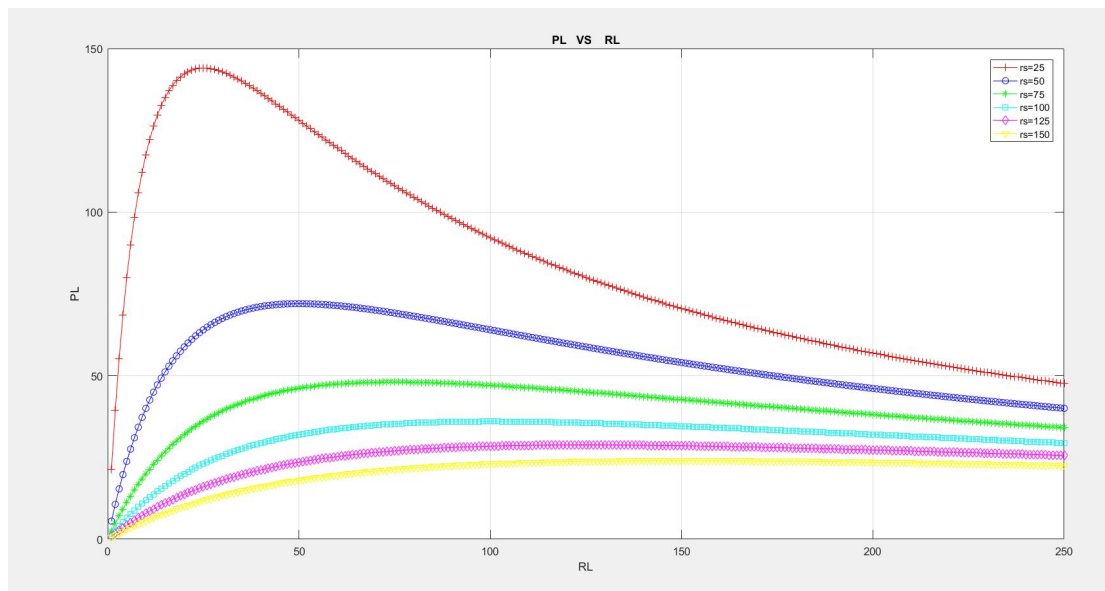


NAME : ALI AYMAN MOHAMED

```
Editor - C:\Users\IP Store\Documents\MATLAB\maxpower.m
maxpower.m x +
1  %NAME :ALI AYMAN MOHAMED
2  clear ;
3  clc;
4  rs=25:25:150;
5  rl=1:250;
6  vs=120;
7  p_all=zeros(6,250);
8  rl_max=zeros(6,1);
9  rs_max=zeros(6,1);
10 for i =1:length(rs)
11     p_all(i,:)=(rl.*vs.^2)./((rl+rs(i)).^2);
12     g=p_all(i,:);
13     rs_max(i) = max(g);
14     rl_max(i)=rl(g==max(g));
15 end
16
17 for i =1:length(rs)
18     fprintf('value of rl that give p max= %3f \n',rl_max(i));
19     fprintf('value of pl max =%3f at  rs=%d \n',rs_max(i),rs(i));
20 end
21
22 plot(rl,p_all(1,:), 'r+-',rl,p_all(2,:), 'bo-',rl,p_all(3,:), 'g*-',rl,p_all(4,:), 'cs-',rl,p_all(5,:), 'md-',rl,p_all(6,:), 'yv-')
23 title('PL VS RL')
24 xlabel('RL')
25 ylabel('PL')
26 legend ('rs=25', 'rs=50', 'rs=75', 'rs=100', 'rs=125', 'rs=150', 'northeast')
27 grid on
28 box on
29
30
```



```
Editor - C:\Users\Ali\Documents\workspace\maxpower.m
maxpower.m x +
1 %NAME :ALI AYMAN MOHAMED
2 - clear ;
3 - clc;

Command Window

value of r1 that give p max= 25.000000
value of p1 max =144.000000 at rs=25
value of r1 that give p max= 50.000000
value of p1 max =72.000000 at rs=50
value of r1 that give p max= 75.000000
value of p1 max =48.000000 at rs=75
value of r1 that give p max= 100.000000
value of p1 max =36.000000 at rs=100
value of r1 that give p max= 125.000000
value of p1 max =28.800000 at rs=125
value of r1 that give p max= 150.000000
value of p1 max =24.000000 at rs=150
Warning: Ignoring extra legend entries.
> To delete children and strings (1/10/2023)
```