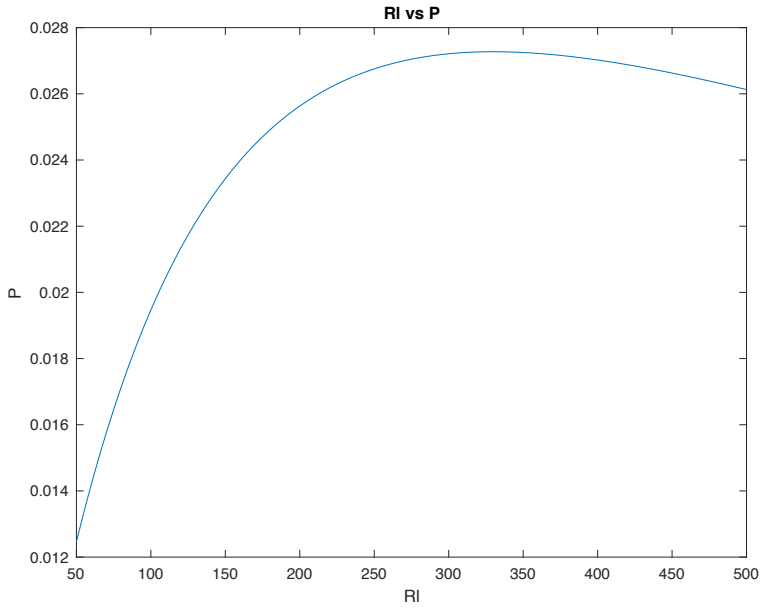
3b. Optimizing Power Transfer to a Load Using Matlab

Code:

```
%1
Vs = 6;
Rs = 330;
Rl=50:5:500;
P = (Vs./(Rs+Rl)).^2.*Rl;
plot(Rl,P)
title('Rl vs P')

[maxP, maxRl] = max(P);
Rl(maxRl)
```



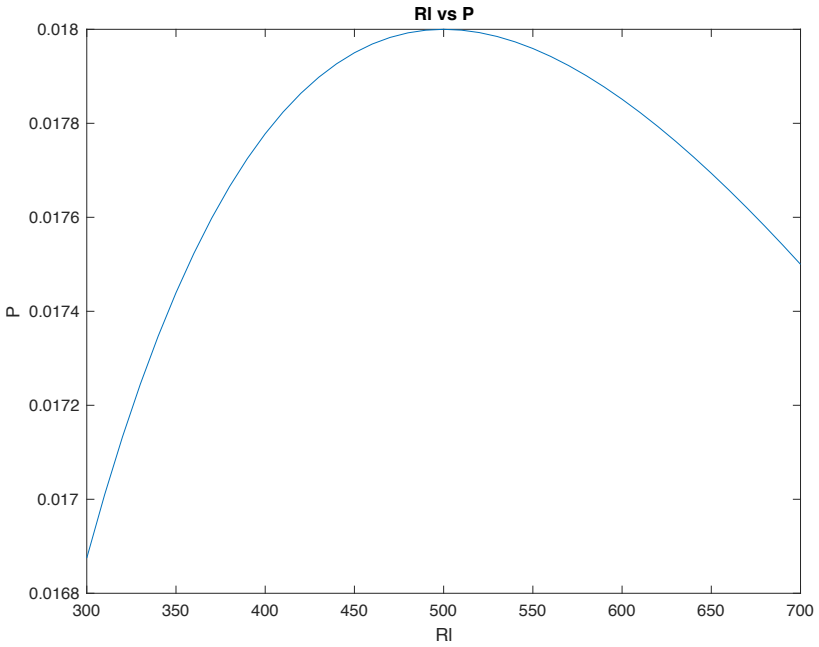

```
ans =

   330 (resistance L)
```

Code:

```
Vs = 6;
Rs = 500;
Rl=300:10:700;
P = (Vs./(Rs+Rl)).^2.*Rl;
plot(Rl,P)
title('Rl vs P')
ylabel('P')
xlabel('Rl')


[maxP, maxRl] = max(P);
Rl(maxRl)
```




```
ans =

   500
```

```
%The value of Rl that will give you the maximum value
of P is the value of
%Rs.
```