

```
>> X=[0 5 10 15 20]
```

```
X =
```

```
0 5 10 15 20
```

```
>> Y=[14 20 22 28 37]
```

```
Y =
```

```
14 20 22 28 37
```

```
>> plot(X,Y)
```

```
>> B0=[1;1;1;1;1]
```

```
B0 =
```

```
1  
1  
1  
1  
1
```

```
>> A=[B0 X']
```

```
A =
```

```
1 0  
1 5  
1 10  
1 15  
1 20
```

```
>> inv(A'*A)*A'*Y'
```

```
ans =
```

```
13.4000  
1.0800
```

```
>> x=linspace(0,20,6)
```

```
x =
```

```
0 4 8 12 16 20
```

```
>> y=13.4+1.08*x
```

y =

13.4000 17.7200 22.0400 26.3600 30.6800 35.0000

```
>> hold on
>> plot(x,y,'r')
>> hold off
>>
>> B1=X'
```

B1 =

0
5
10
15
20

```
>> B2=B1.^2
```

B2 =

0
25
100
225
400

```
>> B3=B1.^3
```

B3 =

0
125
1000
3375
8000

```
>> A=[B0 B1 B2 B3]
```

A =

1	0	0	0
1	5	25	125
1	10	100	1000
1	15	225	3375
1	20	400	8000

```
>> inv(A'*A)*A'*Y'
```

```
ans =
```

```
14.1286
```

```
1.5119
```

```
-0.1114
```

```
0.0047
```

```
>> y1=14.1286+1.5119*x-0.1114*x.^2+0.0047*x.^3
```

```
y1 =
```

```
14.1286 18.6946 21.5006 24.3514 29.0518 37.4066
```

```
>> hold on
```

```
>> plot(x,y1,'g')
```

```
>> hold off
```

```
>>
```