Comunicación Electrónica

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Desafío 14

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Tema: FreeMath

EJERCICIO 1

```
--> pol3=[1 -1 -4 4]

pol3 =   1 -1 -4  4

--> x=-3:0.1:+3

--> y=polyval(pol3,x)

--> T=[x'y']

--> plot(x,y)

--> grid on

--> roots(pol3)

ans =

  -2.0000

   2.0000

   1.0000

--> hold on

--> xlabel('Eje x')

--> ylabel('Eje y')

--> title('Desafio 14')

--> polyval(pol3,0)

ans =  4

--> polyval(pol3,2)

ans =  0
```

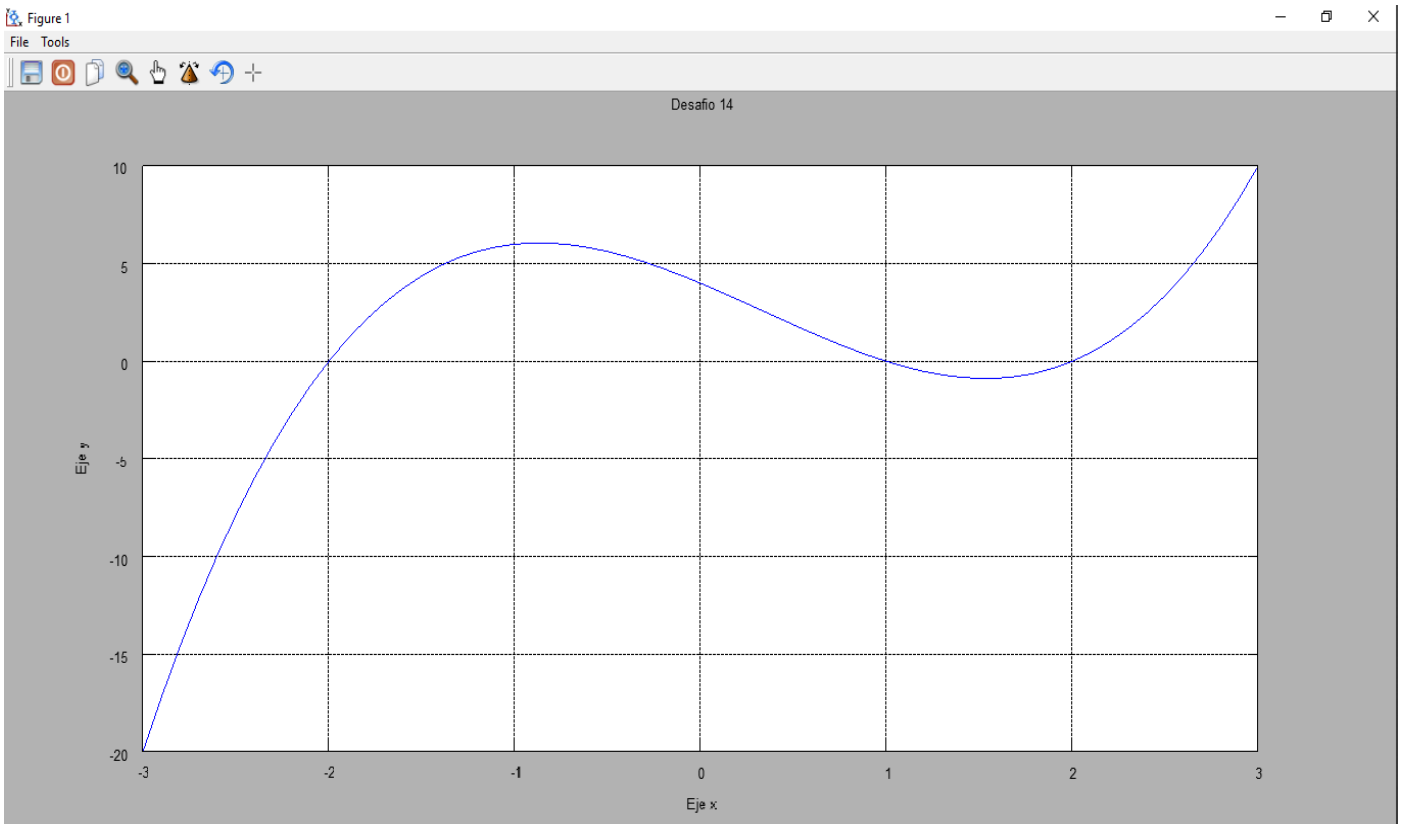
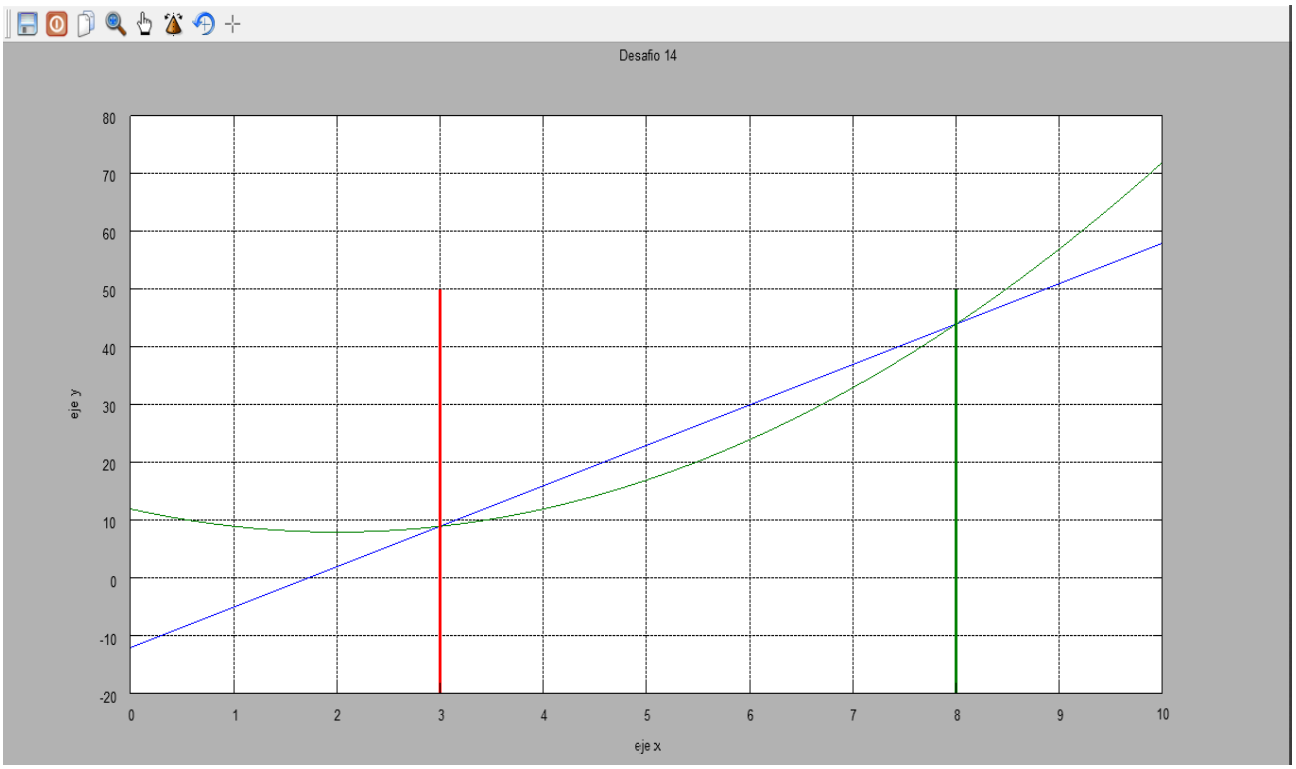


Figure 1
File Tools
Desafio 14
10
5
0
-5
-10
-15
-20
-3
-2
-1
0
1
2
3
Eje y
Eje x

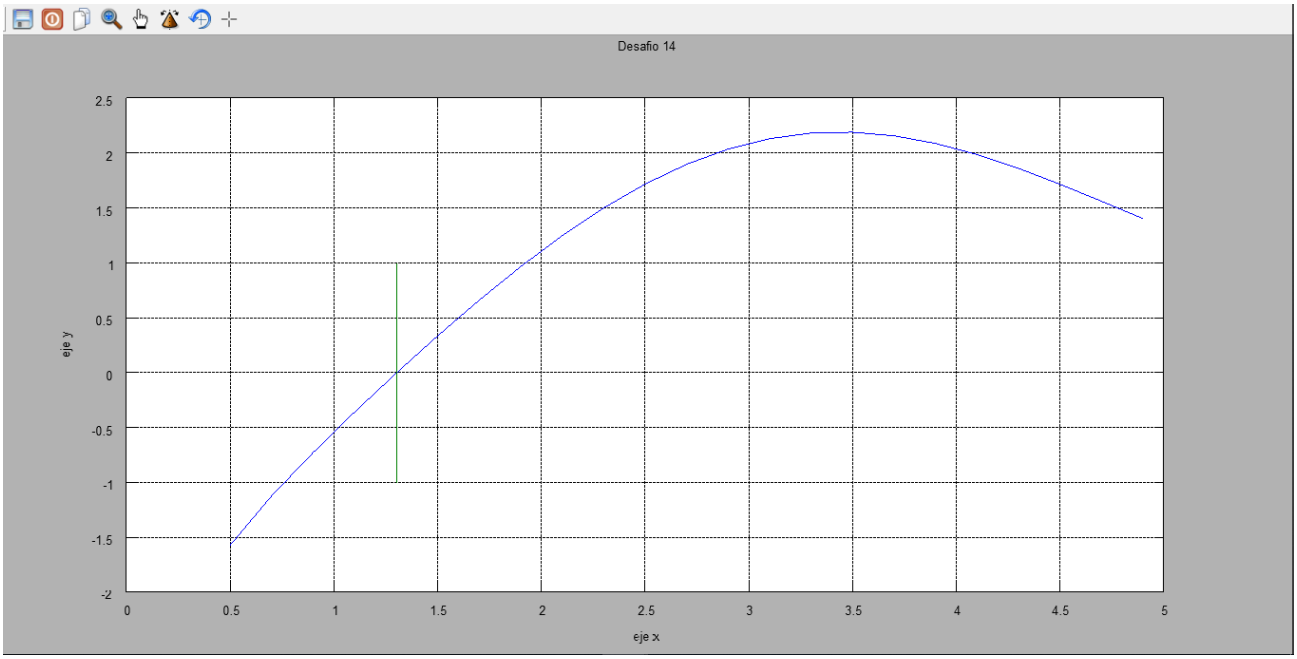
EJERCICIO 2

```
--> r1=[0 7 -12]

r1 =

  0   7 -12

--> p2=[1 -4 12]

p2 =

 1 -4 12

--> poli= p2 - r1

poli =

  1 -11  24

--> roots(poli)

ans =

 8

 3

--> x=0:0.2:10

--> yr1=polyval(r1,x)

--> yp2=polyval(p2,x)

--> plot(x,yr1,x,yp2)

--> grid on

--> hold on

--> plot([3 3],[-20 50],'r','LineWidth',3)

--> plot([8 8],[-20 50],'g','LineWidth',3)

--> xlabel('eje x')

--> ylabel('eje y')

--> title('Desafio 14')
```


Desafio 14
80
70
60
50
40
30
20
10
0
-10
-20
eje y
0
1
2
3
4
5
6
7
8
9
10
eje x

EJERCICIO 3

```
--> f1=inline('log(x)-cos(x)')
f1 =
  inline function object
  f(x) = log(x)-cos(x)
--> x=0.5:0.2:5
--> y=f1(x)
--> plot(x,y)
--> grid on
--> hold on
--> raiz=fzero(f1,1.2)
raiz =
    1.3030
--> plot([1.3030 1.3030],[-1 1],'g','LineWidht',3)
--> axis([0 5 -2 2.5])
--> xlabel('eje x')
--> ylabel('eje y')
--> title('Desafio 14')
```



EJERCICIO 4

```
--> %Por el metodo de eliminacion
--> r1=[2.5 -1]
r1 =
   2.5000   -1.0000
--> r2=[-0.5 1]
r2 =
  -0.5000    1.0000
--> resta=r1-r2
resta =
 3 -2
--> raiz=roots(resta)
raiz =
   0.6667
--> y=polyval(r1,raiz)
y =
   0.6667
--> %Inversion matricial:
--> A=[5 -2;1 2]
A =
 5 -2
 1  2
--> c=[2 2]'
c =
 2
 2
```

```
--> XY=inv(A)*c

XY =

   0.6667

   0.6667

--> %Metodo Grafico:

--> x=-6:0.5:6

--> yr1=polyval(r1,x)

--> yr2=polyval(r2,x)

--> plot(x,yr1,x,yr2)

--> grid on

--> hold on

--> plot([0.6667 0.6667],[-5 5])

--> title('Desafio 14')
```