%Solución de un sistema de ecuaciones:

A=[2 1;1 3]

A =

 2 1

 1 3

b=[7;6]

b =

 7

 6

x=inv(A)\*b

x =

 3.0000

 1.0000

rand(2)

ans =

 0.8147 0.1270

 0.9058 0.9134

rand(3)

ans =

 0.6324 0.5469 0.1576

 0.0975 0.9575 0.9706

 0.2785 0.9649 0.9572

rand(2)\*5

ans =

 2.4269 0.7094

 4.0014 2.1088

round(ans)

ans =

 2 1

 4 2

clc

**%Polinomios**

p=[2 0 1 -5];

roots(p)

ans =

 -0.6174 + 1.2820i

 -0.6174 - 1.2820i

 1.2348

polyval(p,0)

ans =

 -5

polyval(p,[0 1])

ans =

 -5 -2

x=0:0.01:2;

y=polyval(p,x);

plot(x,y)

q=poly([1 2 3+i 3-i])

q =

 1 -9 30 -42 20

roots(q)

ans =

 3.0000 + 1.0000i

 3.0000 - 1.0000i

 2.0000

 1.0000

p

p =

 2 0 1 -5

p1=polyder(p)

p1 =

 6 0 1

**%graficar p y su derivada de 0 a 2**

clc

p1=polyder(p);

y=polyval(p,x);

y1=polyval(p1,x);

plot(x,y,x,y1)

help plot

 PLOT Linear plot.

PLOT(X,Y) plots vector Y versus vector X. If X or Y is a matrix, then the vector is plotted versus the rows or columns of the matrix, whichever line up. If X is a scalar and Y is a vector, disconnected line objects are created and plotted as discrete points vertically at X.

 Various line types, plot symbols and colors may be obtained with PLOT(X,Y,S) where S is a character string made from one element from any or all the following 3 columns:

 b blue . point - solid

 g green o circle : dotted

 r red x x-mark -. dashdot

 c cyan + plus -- dashed

 m magenta \* star (none) no line

 y yellow s square

 k black d diamond

 w white v triangle (down)

 ^ triangle (up)

 < triangle (left)

 > triangle (right)

 p pentagram

 h hexagram

 For example, PLOT(X,Y,'c+:') plots a cyan dotted line with a plus

 at each data point; PLOT(X,Y,'bd') plots blue diamond at each data

 point but does not draw any line.

plot(x,y,'r:',x,y1,'k')

p=poly([1,2,3])

p =

 1 -6 11 -6

x=0:0.01:4;

y=polyval(p,x);

plot(x,y)

grid on

p1=polyder(p)

p1 =

 3 -12 11

pc=roots(p1)

pc =

 2.5774

 1.4226

p2=polyder(p1);

e=polyval(p2,pc)

e =

 3.4641

 -3.4641

plot(x,y)

a=[1 0 -1];

b=[-1 0 2];

t=roots(a-b)

t =

 1.2247

 -1.2247

x=linspace(-2,2,200);

ya=polyval(a,x);

yb=polyval(b,x);

plot(x,ya,'r',x,yb)

c=[0.5,-1];

yc=polyval(c,x);

plot(x,ya,'r',x,yb, x,yc,'g')

f=roots(a-c)

{??? Error using ==> minus Matrix dimensions must agree.}

f=roots(a-[0 c])

f =

 0

 0.5000

a

a =

 1 0 -1

ai=polyint(a)

ai =

 0.3333 0 -1.0000 0

polyval(ai,2)-polyval(ai,0)

ans =

 0.6667

w=conv([1 -1],[1 1])

w =

 1 0 -1

p=[1 0 0 1];

q=[1 -1];

[d r]=deconv(p,q)

d =

 1 1 1

r =

 0 0 0 2