

```

A=[1 3;2 2;3 1]
A =
     1     3
     2     2
     3     1
b=[1;2;1]
b =
     1
     2
     1
A2=(A.')*A
A2 =
    14    10
    10    14
b2=(A.')*b
b2 =
     8
     8
S=[14 10 8;10 14 8]
S =
    14    10     8
    10    14     8
rats(rref(S))
ans =
     1     0     1/3
     0     1     1/3
x=[1/3; 1/3]
x =
    0.3333
    0.3333
p=A*x;
rats(p)
ans =
     4/3
     4/3
     4/3
x=[0 1 2 3 4];y=[3 2 4 4 4];
P=polyfit(x,y,3)
P =
   -0.2500    1.5000   -1.7500    2.9000

```

```

rats(P)
ans =
   -1/4    3/2   -7/4   29/10
xx=[0:0.01:4];yy=polyval(P,xx);
plot(x,y,'*',xx,yy)
diary off

```

