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Problem 3 (10 points) MatLab file also in zip file(prob3.m)

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>> X=[0;2;2;3;-1;1]
Y=[1;-3;-2;-3;-1;-1]
Xw=[1,0;1,2;1,2;1,3;1,-1;1,1]

```

```

X =

     0
     2
     2
     3
    -1
     1

Y =

     1
    -3
    -2
    -3
    -1
    -1

Xw =

     1     0
     1     2
     1     2
     1     3
     1    -1
     1     1

>> A=Xw'*Xw

A =

     6     7
     7    19

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>> c=Xw'*Y

c =

    -9
   -19

>> w=inv(A)*c

w =

   -0.5846
   -0.7846

>> w2=inv(A+5*eye(2))*c

w2 =

   -0.3860
   -0.6791

>> syms x y;
f(y)=w(1)+w(2)*x^3
f(y)=w2(1)+w2(2)*x^3

f(y) =

- (51*x^3)/65 - 38/65

f(y) =

- (146*x^3)/215 - 83/215

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