

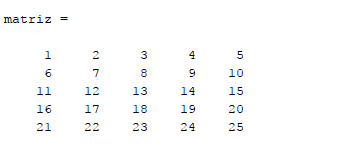
Numerical Analysis

Lab 1

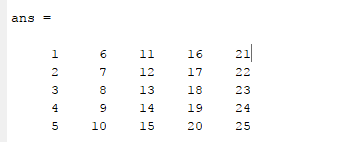


Task 1:

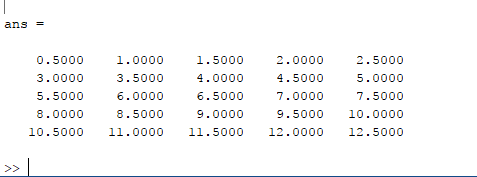
>> matriz = [1 2 3 4 5;6 7 8 9 10;11 12 13 14 15;16 17 18 19 20;21 22 23 24 25]



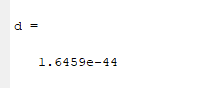
1. >> matriz’



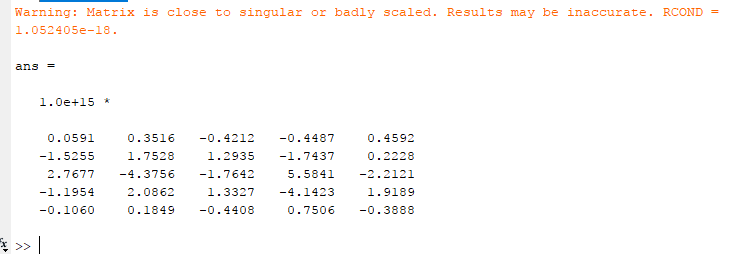
1. >> matriz/2



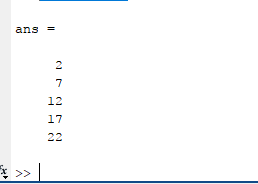
1. >> d=det(matriz)



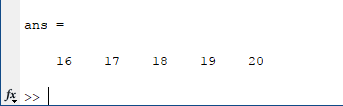
1. >> inv(matriz)



1. >> matriz(:,2)

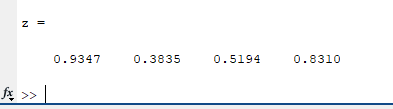


1. >> matriz(4,:)

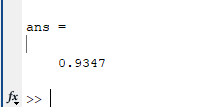


Task 2:

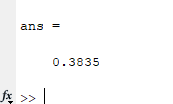
>> z = [0.9347,0.3835,0.5194,0.8310]



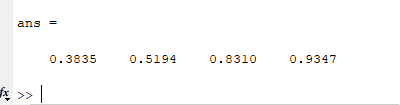
1. >> max(z)



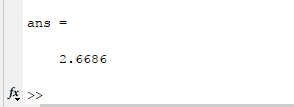
1. >> min(z)



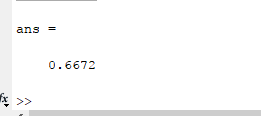
1. >> sort(z)



1. >> sum(z)

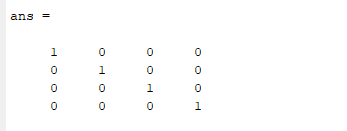


1. >> mean(z)

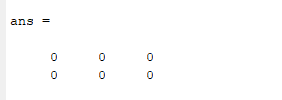


Task 3:

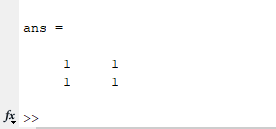
>> eye(4,4)



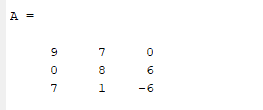
**>> zeros(2,3)**



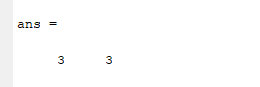
**>> ones(2)**



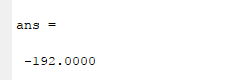
**>> A = [9,7,0;0,8,6;7,1,-6]**



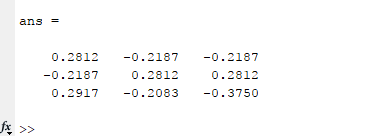
**>> size(A)**



**>> det(A)**



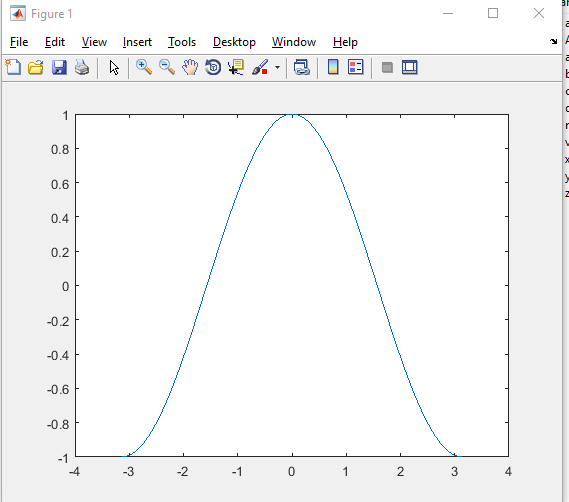
**>> inv(A)**



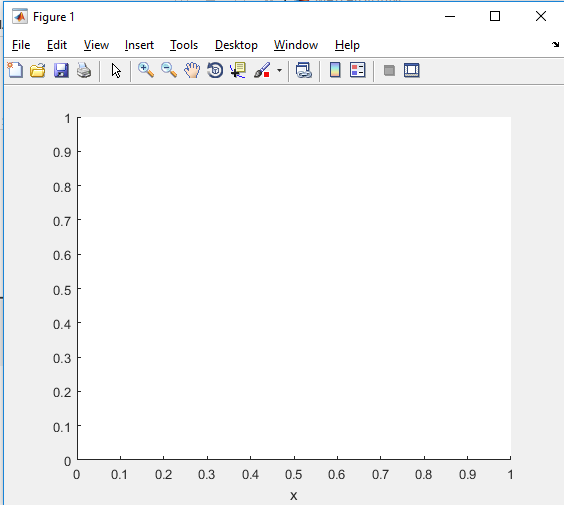
**» x=-pi:0.01:pi;**

**» y=cos(x);**

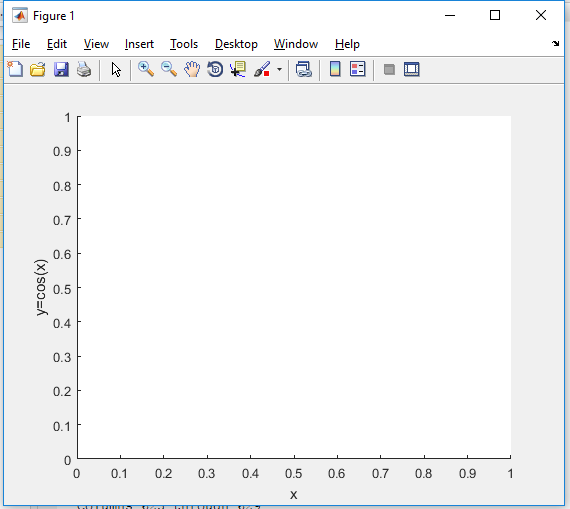
**» plot(x,y)**



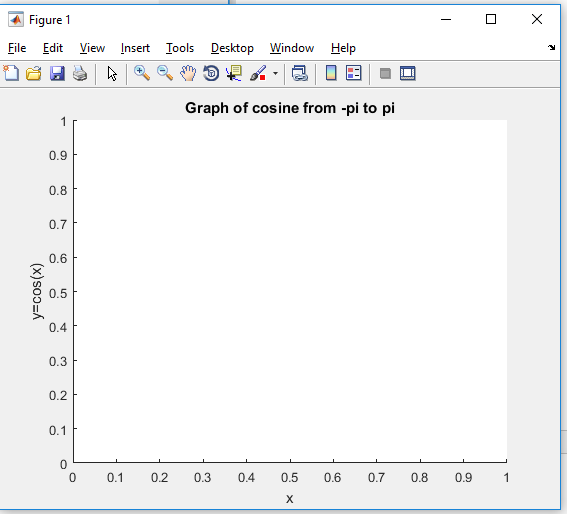
**>> xlabel('x')**



**>> ylabel('y=cos(x)')**



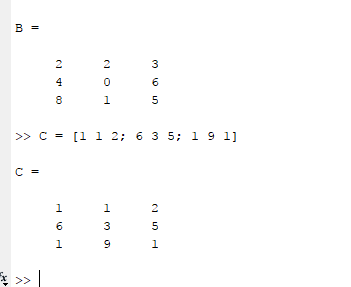
**>> title('Graph of cosine from -pi to pi')**



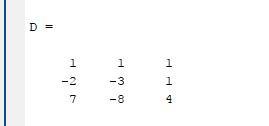
Task 4:

**B = [2 2 3; 4 0 6; 8 1 5]**

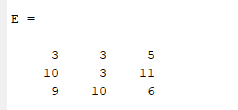
**C = [1 1 2; 6 3 5; 1 9 1]**



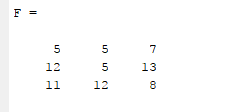
1. >> D = B – C



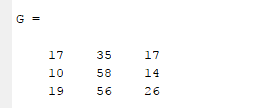
1. >> E = B + C



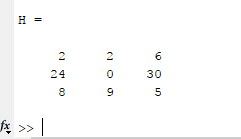
1. >> F= E+2



1. >> G=B\*C

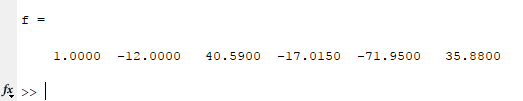


1. >> H=B.\*C

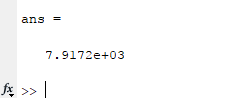


Task 5:

>> f= [1 -12 40.59 -17.015 -71.95 35.88]



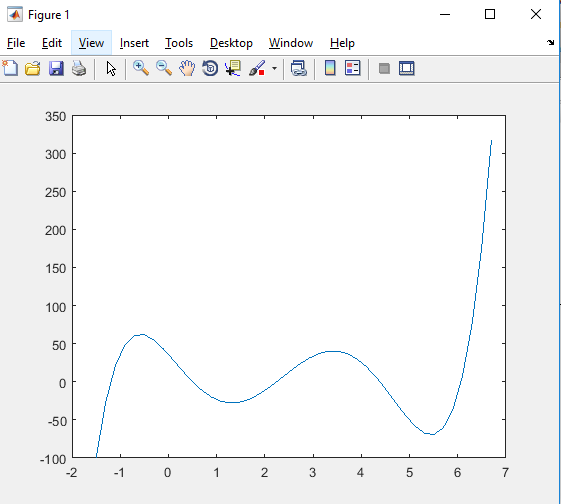
>> polyval(f,9)



>> x = -1.5:.2:6.7;

>> y=polyval(f,x);

>> plot(x,y)



>> roots(f)

