# Question 01

## Code

clc

clear all

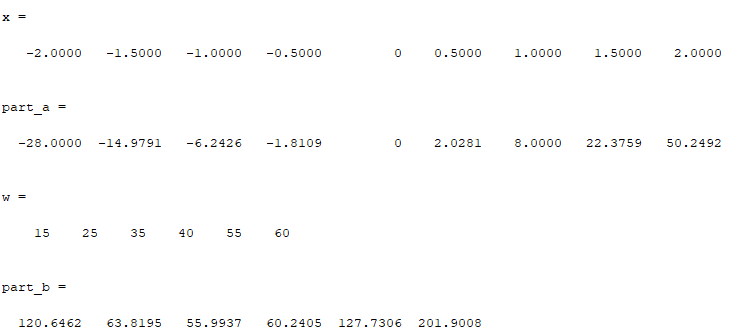
x=[-2:0.5:2]

part\_a=(x+x.\*sqrt(x+3)).\*(1+2\*x.^2)-x.^3

w=[15 25 35 40 55 60]

part\_b=(4.\*sind(w) + 6 )./(cosd(w).^2 .\* sind(w)).^2

## Output



# Question 02

## Code

clc

clear all

v=[-5.6 11 -14]

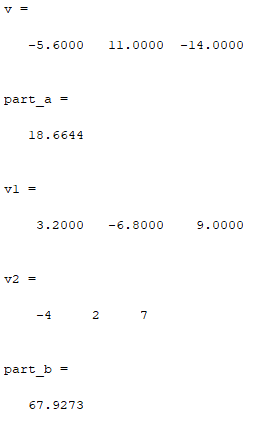
part\_a=sqrt(sum([v(1).^2 ,v(2).^2 ,v(3).^2]))

v1=[3.2 -6.8 9]

v2=[-4 2 7]

part\_b=acosd((v1(1)\*v2(1)+v1(2)\*v2(2)+v1(3)\*v2(3))/(sqrt(sum([v1(1).^2 ,v1(2).^2 ,v1(3).^2])) \*sqrt(sum([v2(1).^2 ,v2(2).^2 ,v2(3).^2]))))

## Output



# Question 03

## Code

clc

clear all

x=[1:2:7]

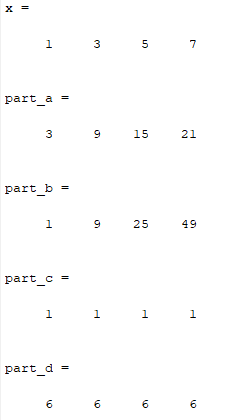
part\_a=3.\*x

part\_b=x.^2

part\_c=x./x

part\_d=[x(1)+5,x(2)+3,x(3)+1,x(4)-1]

## Output



# Question 04

## Code

clc

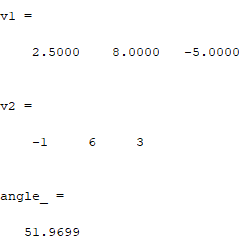
clear all

v1=[2.5 8 -5]

v2=[-1 6 3]

angle\_=asind(dot(cross(v1,v2),cross(v1,v2))/(dot(v1,v1)\*dot(v2,v2)))

## Output



# Question 05

## Code

clc

clear all

A=[5 -3 7 ; 1 0 -6; -4 8 9]

B=[3 2 -1 ;6 8 -7; 4 4 0]

C=[-9 8 3 ; 1 7 -5; 3 3 6]

Part\_a\_1=5\*(B+C)

Part\_a\_2=5\*B+5\*C

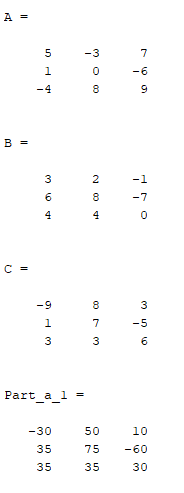
part\_b\_left=inv((B\*C))

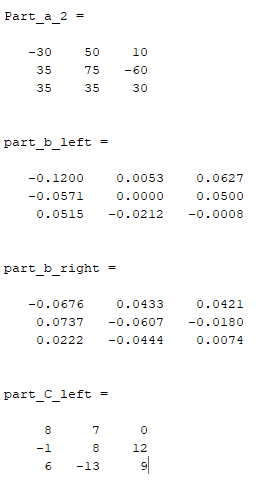
part\_b\_right=inv(B)\*inv(C)

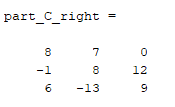
part\_C\_left=(A+B)'

part\_C\_right=A'+B'

## Output







# Question 06

## Code

clc

clear all

A=[2 -4 5 -3.5 1.8 4;-1.5 3 4 -1 -2 5;5 1 -6 3 -2 2;

1.2 -2 3 4 -1 4; 4 1 -2 -3 -4 1.5;2 1 -1 4 -2 -4]

B=[52.52;-21.1;-27.6;9.16;-17.9;-16.2]

sol=inv(A)\*B;

u=sol(1)

v=sol(2)

w=sol(3)

x=sol(4)

y=sol(5)

z=sol(6)

## Output

