%NAME: Mokshada Pravin Toke

% ROLL NO : 72

n=input('\nEnter the value of given points n');

for i=1:n

ar2(i)=input('\nEnter the value of x:');

ar1(i)=input('\nEnter the value of y :');

end

sum0=0;

sum1=0;

sum2=0;

sum3=0;

sum4=0;

sum5=0;

sum6=0;

for i=1:n

sum0=sum0+ar2(i);

sum1=sum1+ar1(i);

sum2=sum2+ar2(i)\*ar1(i);

sum3=sum3+ar2(i)\*ar2(i);

sum4=sum4+ar2(i)\*ar2(i)\*ar1(i);

sum5=sum5+ar2(i)\*ar2(i)\*ar2(i);

sum6=sum6+ar2(i)\*ar2(i)\*ar2(i)\*ar2(i);

end

ar(1,1)=sum3;

ar(1,2)=sum0;

ar(1,3)=n;

ar(2,1)=sum5;

ar(2,2)=sum3;

ar(2,3)=sum0;

ar(3,1)=sum6;

ar(3,2)=sum5;

ar(3,3)=sum3;

ar1(1)=sum1;

ar1(2)=sum2;

ar1(3)=sum4;

n=3;

for q=1:n

i=q;

d=ar(i,i);

for j=1:n

ar(i,j)=ar(i,j)/d;

end

ar1(i)=ar1(i)/d;

for i=q+1:n

s=ar(i,q);

for j=1:n

ar(i,j)=ar(i,j)-s\*ar(q,j);

end

ar1(i)=ar1(i)-s\*ar1(q);

end

end

disp(ar);

a(n)=ar1(n);

for w=n-1:-1:1

a(w)=ar1(w);

for e=w:n-1

a(w)=a(w)-(a(e+1)\*ar(w,e+1));

end

end

fprintf('\n\n y=%fx\*x+%f\*x+%f',a(1),a(2),a(3));

OUTPUT

Enter the value of given points n

7

Enter the value of x:

-3

Enter the value of y :

12

Enter the value of x:

-2

Enter the value of y :

4

Enter the value of x:

-1

Enter the value of y :

1

Enter the value of x:

0

Enter the value of y :

2

Enter the value of x:

1

Enter the value of y :

7

Enter the value of x:

2

Enter the value of y :

15

Enter the value of x:

3

Enter the value of y :

30

1.0000 0 0.2500

0 1.0000 0

0 0 1.0000

y=2.119048x\*x+2.928571\*x+1.666667