1. Write a C program which can input some 2D points and the number of points in each quadrant.

Sample Input

6

5 4

2 4

-2 -5

3 -5

10 8

4 5

Sample Output

First Quadrant: 4

Second Quadrant: 0

Third Quadrant: 1

Fourth Quadrant: 1

#include<stdio.h>

#include<math.h>

int main(){

int x,y,a,b,c,d,i,n;

printf("Enter the total number of points:\n");

scanf("%d",&n);

printf("Enter the points (x,y) one by one:\n");

a=0;

b=0;

c=0;

d=0;

for(i=1;i<=n;i=i+1){

scanf("%d %d",&x,&y);

if(x>0 && y>0){

a=a+1;

}

else if(x<0 && y>0){

b=b+1;

}

else if(x<0 && y<0){

c=c+1;

}

else if(x>0 && y<0){

d=d+1;

}

}

printf("First Quadrant: %d\n",a);

printf("Second Quadrant: %d\n",b);

printf("Third Quadrant: %d\n",c);

printf("Fourth Quadrant: %d\n",d);

return 0;

}

2. Write a C program which can input some students’ marks and display what is highest marks.

Sample Input

5

35 32 27 39 29

Sample Output

39

#include<stdio.h>

#include<math.h>

int main(){

int x,a,i,n;

printf("Enter the total number of students:\n");

scanf("%d",&n);

printf("Enter their number one by one:\n");

a=0;

for(i=1;i<=n;i++){

scanf("%d",&x);

if(x>a){

a=x;

}

}

printf("Highest marks: %d\n",a);

return 0;

}

3. Write a C program which can input some 2D points and display the point which is farthest from the

origin

Sample Input

6

5 4

2 4

-2 -5

3 -5

10 8

4 5

Sample Output

10 8

#include<stdio.h>

#include<math.h>

int main (){

int x,y,i,n,p,q;

float d,m;

printf("Enter the total number of points:\n");

scanf("%d",&n);

printf("Enter the points (x,y)one by one:\n");

m=p=q=0;

for (i=1; i<=n;i++){

scanf("%d%d",&x,&y);

d=sqrt(x\*x+y\*y);

if(d>m){

m=d;

p=x;

q=y;

}

}

printf ("The point (%d,%d) is the farthest point and distance is: %.2f", p,q,m);

return 0;

}

4. Write a C program which can input some students’ CGPA and display difference between highest and

lowest CGPA.

Sample Input

5

3.5 3.2 2.7 2.9 3.9

Sample Output

1.2

#include<stdio.h>

#include<math.h>

int main(){

int n;

float x,a,b,c,i;

printf("Enter the total number of students CGPA:\n");

scanf("%d",&n);

printf("Enter their CGPA one by one:\n");

a=0;

b=5;

for(i=1;i<=n;i++){

scanf("%f",&x);

if(x>a){

a=x;

}

if(x<b){

b=x;

}

}

c=((float)a-b);

printf("Difference between highest and lowest CGPA: %.2f\n",c);

return 0;

}

5. Write a C program which can input two numbers from the user and display the biggest common

divisor of those numbers.

12 18

Biggest Common Divisor is 6

#include <stdio.h>

int main()

{

int x, y, i, a;

printf("Enter two numbers:\n");

scanf("%d %d", &x, &y);

for(i=1; i<=x && i<=y; i=i+1){

if(x%i==0 && y%i==0)

a = i;

}

printf("Greatest common divisor is: %d",a);

return 0;

}

6. Write a C program which can input two numbers from the user and display the lowest common

multiple of those numbers.

12 18

Lowest Common Multiple of 12 and 18 is 36

#include <stdio.h>

int main()

{

int x, y, i, a,gcd;

printf("Enter two numbers:\n");

scanf("%d %d", &x, &y);

for (i=1;i<=x && i<=y;i++){

if(x%i==0 && y%i==0){

gcd=i;

}

}

a=(x\*y)/gcd;

printf("Lowest common multiple of %d and %d=%d",x,y,a);

return 0;

}