

## LAB PROGRAMS

1) Area of Triangle

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
```

```
double areaOfTriangle (double a, double b, double c)
{
```

```
    double s, area;
```

```
    s = (a+b+c)/2;
    area = sqrt(s*(s-a)*(s-b)*(s-c));
```

```
    return area;
}
```

```
void main ()
{
```

```
    double a, b, c, area;
```

```
    clrscr();
    printf ("Enter the sides of the triangle in ");
    scanf ("%lf %lf %lf", &a, &b, &c);
```

```
    area = areaOfTriangle (a, b, c);
```

```
    printf ("Area of triangle = %lf", area);
    getch();
    clrscr();
}
```

## 2. Roots of A Quadratic Equation

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
```

```
void main()
```

```
{
```

```
int a, b, c, d;
```

```
double root1, root2; x1, x2;
```

```
clrscr();
```

```
printf("Enter a, b, and c where  $a \cdot x^2 + b \cdot x + c = 0$  \n");
```

```
scanf("%d %d %d", &a, &b, &c);
```

```
d = b*b - 4*a*c;
```

```
if (d < 0)
```

```
printf("Roots are imaginary; \n No solution. \n");
```

```
if (d == 0) else if (d == 0)
```

```
printf("Both roots are equal. \n");
```

```
x1 = -b / (2.0 * a);
```

```
x2 = x1
```

```
printf("First Root Root1 = %f \n", x1);
```

```
printf("Second Root = %f \n", x2);
```

```
else
```

```
{
```

```
printf("Both roots are real and distinct");
```

```
x1 = (-b + sqrt(d)) / (2.0 * a);
```

```
x2 = (-b - sqrt(d)) / (2.0 * a);
```



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```
printf("First Root = %f.\n", x1);  
printf("Second Root = %f.\n", x2);
```

```
q  
getch();  
clrscr();  
q
```

3. 

```
#include <stdio.h>  
#include <conio.h>
```

```
float  
double average (int a, b, c)  
{
```

```
float avg;  
clrscr();
```

```
printf("\n ENTER THREE NUMBERS:");  
scanf("%d %d %d", &n1, &n2, &n3);
```

```
avg = (n1 + n2 + n3) / 3.0;
```

```
return avg;
```

```
q
```

```
void main()
```

```
{
```

3. #include <stdio.h>  
#include <conio.h>

float average (int a, int b, int c)  
{

float avg;  
avg = (a + b + c) / 3.0;  
return avg;  
}

void main ()  
{

int n1, n2, n3;  
float average;

clrscr();  
printf ("Enter three numbers: ");  
scanf ("%d %d %d", &n1, &n2, &n3);  
average = average (n1, n2, n3);

~~printf (" ");~~

printf ("Average: %d", avg average);  
getch();  
clrscr();  
}



65 4  
x a

4 5 6  
7

4. #include <stdio.h>

~~int main~~

void main()

{

clearly: int num1, num2, num3;

printf("Enter three numbers: ");

scanf("%d %d %d", &num1, &num2, &num3);

if (num1 < num2 && num1 < num3)

{

printf("%d is smallest", num1);

}

else if (num2 < num3)

{

printf("%d is smallest", num2);

}

else

{

printf("%d is smallest", num3);

}

getch();

return 0;

}