

Program 1:

Area of Triangle using Heron's formula.

Step 1

```
a=3  
b=4  
c=5  
s=(a+b+c)/2  
ar=(s*(s-a)*(s-b)*(s-c))^1/2
```

Step 2

```
float a=3;  
float b=4;  
float c=5;  
float s=(a+b+c)/2;  
float ar=sqrt(s*(s-a)*(s-b)*(s-c));
```

```
//step 3
#include <stdio.h>
#include <math.h>

int main()
{
    float a=3;
    float b=4;
    float c=5;

    float s=(a+b+c)/2;
    float ar=sqrt(s*(s-a)*(s-b)*(s-c));

    printf("Area = %f",ar);
    return 0;
}
```

```
//step 4
#include <stdio.h>
#include <math.h>

int main()
{
    float side1=3;
    float side2=4;
    float side3=5;

    float semi_perimeter=(side1 + side2 +
side3)/2;
    float
area=sqrt(semi_perimeter*(semi_perimeter-side1)*(s
emi_perimeter-side2)*(semi_perimeter-side3));

    printf("Area = %f",area);
    return 0;
}
```

```
//step 5
#include <stdio.h>
#include <math.h>

int main()
{
    float side1;
    printf("Enter first side:");
    scanf("%f",&side1);

    float side2;
    printf("Enter second side:");
    scanf("%f",&side2);

    float side3;
    printf("Enter third side:");
    scanf("%f",&side3);

    float semi_perimeter=(side1 + side2 +
side3)/2;
    float
area=sqrt(semi_perimeter*(semi_perimeter-side1)*(s
emi_perimeter-side2)*(semi_perimeter-side3));

    printf("Area = %f",area);

    return 0;
}
```

```
//step 6
#include <stdio.h>
#include <math.h>

int main()
{
    float side1, side2, side3, semi_perimeter,
area;
    printf("Enter first side:");
    scanf("%f",&side1);

    printf("Enter second side:");
    scanf("%f",&side2);

    printf("Enter third side:");
    scanf("%f",&side3);

    semi_perimeter=(side1 + side2 + side3)/2;

area=sqrt(semi_perimeter*(semi_perimeter-side1)*(s
emi_perimeter-side2)*(semi_perimeter-side3));

    printf("Area = %f",area);

    return 0;
}
```

Program 2:

Volume of cuboid.

Step 1

```
l=10  
b=20  
h=30  
v=l*b*c
```

Step 2

```
float l=10;  
float b=20;  
float h=30;  
float v=l*b*h;
```

```
//step 3
#include <stdio.h>

int main()
{
    float l=10;
    float b=20;
    float h=30;

    float v=l*b*h;

    printf("Volume = %f",v);
    return 0;
}
```

```
//step 4
#include <stdio.h>

int main()
{
    float length=10;
    float breadth=20;
    float height=30;

    float volume = length * breadth * height;

    printf("Volume = %f",volume);
    return 0;
}
```



```
//step 5
#include <stdio.h>

int main()
{
    float length;
    printf("Enter the length of cuboid:");
    scanf("%f",&length);

    float breadth;
    printf("Enter the breadth of cuboid:");
    scanf("%f",&breadth);

    float height;
    printf("Enter the height of cuboid:");
    scanf("%f",&height);

    float volume = length * breadth * height;

    printf("Volume = %f",volume);
    return 0;
}
```

```
//step 6
#include <stdio.h>

int main()
{
    float length, breadth, height, volume;
    printf("Enter the length of cuboid:");
    scanf("%f",&length);

    printf("Enter the breadth of cuboid:");
    scanf("%f",&breadth);

    printf("Enter the height of cuboid:");
    scanf("%f",&height);

    volume = length * breadth * height;

    printf("Volume = %f",volume);
    return 0;
}
```

Program 3:

To convert days into years.

Step 1

```
d=400  
y=d/365  
w=(d%365)/7  
d=d-(y+w)
```

Step 2

```
int d=400;  
int y=d/365;  
int w=(d%365)/7;  
d=d-(y+w);
```

```
//step 3
#include <stdio.h>

int main()
{
    int d=400;
    int y=d/365;
    int w=(d%365)/7;
    d=((d%365)%7);

    printf("%d years %d weeks %d days",y,w,d);
    return 0;
}
```

```
//step 4
#include <stdio.h>

int main()
{
    int days=400;
    int years=days/365;
    int weeks=(days%365)/7;
    days=((days%365)%7);

    printf("%d years %d weeks %d
days",years,weeks,days);

    return 0;
}
```

```
//step 5
#include <stdio.h>

int main()
{
    int days=400;
    printf("Enter number of days:");
    scanf("%d",&days);

    int years=days/365;
    int weeks=(days%365)/7;
    days=((days%365)%7);

    printf("%d years %d weeks %d
days",years,weeks,days);

    return 0;
}
```

```
//step 6
#include <stdio.h>

int main()
{
    int days, weeks, years;
    printf("Enter number of days:");
    scanf("%d",&days);

    years = days/365;
    weeks = (days%365)/7;
    days = ((days%365)%7);

    printf("%d years %d weeks %d
days",years,weeks,days);

    return 0;
}
```

Program 4:

Surface area of sphere.

Step 1

```
r=10;  
sur=4*3.14*r*r
```

Step 2

```
float r=10;  
float sur=4*3.14*r*r;
```



```
//step 3
#include <stdio.h>

int main()
{
    float r = 10;
    float sur = 4*3.14*r*r;

    printf("Surface area of sphere is = %f",sur);

    return 0;
}
```

```
//step 4
#include <stdio.h>

int main()
{
    float radius = 10;
    float surface_area = 4*3.14*radius*radius;

    printf("Surface area of sphere is =
%f",surface_area);

    return 0;
}
```

```
//step 5
#include <stdio.h>

int main()
{
    float radius;
    printf("Enter radius of sphere:");
    scanf("%f",&radius);

    float surface_area = 4*3.14*radius*radius;

    printf("Surface area of sphere is = %f sq.
units",surface_area);

    return 0;
}
```

```
//step 6
#include <stdio.h>

int main()
{
    float radius, surface_area;
    printf("Enter radius of sphere:");
    scanf("%f",&radius);

    surface_area = 4*3.14*radius*radius;

    printf("Surface area of sphere is = %f sq.
units",surface_area);

    return 0;
}
```

Program 5:

To pythagoras theorem.

Step 1

$l=3$

$b=4$

$h=(l^2 + b^2)^{1/2}$

Step 2

float l=3;

float b=4;

float

h=pow(pow(l,2),po
w(b,2))

```
//step 3
#include <stdio.h>
#include <math.h>

int main()
{
    float l=3;
    float b=4;

    float h = sqrt((l*l)+(b*b));

    printf("Hypotenuse = %.1f",h);

    return 0;
}
```

```
//step 4
#include <stdio.h>
#include <math.h>

int main()
{
    float perpendicular = 3;
    float base = 4;

    float hypotenuse =
sqrt((perpendicular*perpendicular)+(base*base));

    printf("Hypotenuse = %.1f",hypotenuse);

    return 0;
}
```

```
//step 5
#include <stdio.h>
#include <math.h>

int main()
{
    float perpendicular;
    printf("Enter the value of perpendicular:");
    scanf("%f",&perpendicular);

    float base;
    printf("Enter the value of base:");
    scanf("%f",&base);

    float hypotenuse =
sqrt((perpendicular*perpendicular)+(base*base));

    printf("Hypotenuse = %.1f",hypotenuse);

    return 0;
}
```



```
//step 6
#include <stdio.h>
#include <math.h>

int main()
{
    float perpendicular, base, hypotenuse;
    printf("Enter the value of perpendicular:");
    scanf("%f",&perpendicular);

    printf("Enter the value of base:");
    scanf("%f",&base);

    hypotenuse =
sqrt((perpendicular*perpendicular)+(base*base));

    printf("Hypotenuse = %.1f",hypotenuse);

    return 0;
}
```