Arithmetic operations

1. write a program that takes the radius of a circle from the user and prints the area and circumference of the circle.

```
#include <iostream>

using namespace std;

int main ()
{float radius, area;

  cout<<"Enter the Radius=";
  cin >>radius;

area = 2*3.14* radius;

cout<<"Area of the circle is: "<<area;

    return 0;
}
```

2. write a program the will take the length and width of a rectangle from the user and prints the area perimeter of the rectangle.

```
#include <iostream>
using namespace std;

int main () {
float length,width,perimater;

    cout<<"Enter the Length=";
    cin >>length;
    cout<<"Enter the Width=";
    cin >>width;

 perimater = length*width;
     cout<<"Area of the perimater is: "<<perimater;
    return 0;
}
```

3.Write a program that will take the height and base of triangle from the user and prints the area of tringle.

```
#include <iostream>
using namespace std;

int main ()
{float hight,base,tingle;

  cout<<"Enter the Hight=";
  cin >>hight;
  cout<<"Enter the Base=";
  cin >>base;

 tingle = 0.5*hight*base;

   cout<<"Area of the Tingle is: "<<tingle;

   return 0;
}
```

4.Write a program that takes the height of the user in meter and converts it to foot. (1 inch =2.54cm, 1foot =12 inch).

```
#include <iostream>
using namespace std;

int main (){
float hight,centimeter,inch,foot;

   cout<<"Enter the Hight=";
   cin >>hight;

centimeter=100*hight;
inch=centimeter/2.54;
foot=inch/12;

cout<<"Showing meter to foot: "<<foot;

   return 0;
}
```

5.Write a program that takes a temperature input in Fahrenheit and displays the temperature in Celsius and in Kelvin. Use the conversion formulae 5(F-32) =9C and C=K-273.15.

```
#include <iostream>
using namespace std;

int main () {
float fahrenheit,Celsius,Kelvin;

    cout<<"Enter the fahrenheit=";
    cin >>fahrenheit;

Celsius=0.55*fahrenheit-17.77;
Kelvin=Celsius+273.15;

     cout<<"Celsius= "<<Celsius <<endl;
     cout<<"Kelvin= "<<Kelvin;

   return 0;
}
```

**

```
/* In this code we see one line more print out */

#include <iostream>
using namespace std;

int main(){
int num1,num2,a,b,c,d;
   cout<<"Enter the 1.num=";
   cin>>num1;
   cout<<"Enter the 2.num=";
   cin>>num2;

a=num1+num2;
b=num1-num2;
c=num1*num2;
d=num1/num2;
   cout<<"For (a="<<a<<", b="<<b<<", c="<<c<<")";

   return 0;
}
```

6.Write a program that converts that number of days into month and years. For example, if the user inputs 813 days, the program prints: 2 years 2 month 23 days.

(don't worry about leap year and you can calculate using

1 month =30days)

```
#include <iostream>

using namespace std;

int main ()

{int ndays, y, m, d;

    cout<<"Input of days=";

    cin >>ndays;

        y =   ndays/365;

        ndays = ndays-(365*y);

        m = ndays/30;

        d = ndays-(30*m);

     cout<<"year= "<<y <<endl;

     cout<<"Month= "<<m<<endl;

     cout<<"Day="<<d;

return 0;

}
```

7.Write a program that takes the number of hours as input and displays the equivalent number of week, days, and hours. For example, if the user inputs 4000 hours, the program displays 23 week, 5 days and 16 hours.

```
 #include <iostream>

using namespace std;

int main () {
 int nh,w,d,h;
      cout << "Enter the Hours=";
      cin>>nh;

    w=nh/ (24*7);

     nh=nh-(24*7*w);

    d=nh/24;

     h=nh-(24*d);

        cout<<"Week:"<<w<<endl;
        cout<<"Day:"<<d<<endl;
        cout<<"Hours"<<h;
    return 0;
}
```

8.Write a program that swaps (exchanges) the values of two varibles.

```
#include <iostream>
using namespace std;

int main ()
 {int x = 5, y = 10, swaps;

swaps = x;
   x = y;
   y = swaps;

 cout<<"x="<<x <<endl;
 cout<<"y="<<y<<endl;

   return 0;
}
```

```
/*  Note: If x=5 , y=10
        swaps=5
        x=10
        Y=swaps=5  */
```

9.Write a program that swaps the values without using a 3rd variable.

```
#include <iostream>
using namespace std;

int main ()
{int x,y;
cout<<"x=";
cin>>x;
cout<<"y=";
cin>>y;

x=x+y;
y=x-y;
x=x-y;

cout<<"x="<<x<<endl;
cout<<"y="<<y<<endl;
 return 0;}
```

```
/*  Note: If x=5, y=6
        x=5+6=11
        y=11-6=5
        x=11-5=6  */
```

10.Write a program that takes a 3-digit positive integer from the user and then prints the reversed number. For example, if the user enters 289, the program prints 982.

```
#include <iostream>
using namespace std;
int main () {
int num,x,y,z,revers;

   cout<<"Enter the Number=";
   cin>>num;

x=num/100;
y=(num%100)/10;
z=num%10;
revers=(100*z) + (10*y) + x;

    cout<<"This is Revers="<<revers;
return 0;
}
```

or

```
#include <iostream>
using namespace std;
int main ()
{
int num, reverse=0, a;

   cout<<"Enter a number: ";
   cin>>num;

  while (num !=0)
  {
    a=num%10;
    reverse=reverse*10+a;
    num/=10;
  }
     cout<<"Reversed Number: "<<reverse;
return 0;
}
```

11.Take an integer from the user and print the last digit of that number. For example, if the user enters 10773, the program prints 3.

```
#include<iostream>
using namespace std;

int main () {
int num,lest;

   cout<<"Enter any number=";
   cin>>num;

lest=num%10;

   cout<<"This is the Lestdigit="<<lest;
return 0;
}
```

12.Write a program that takes a decimal number from the user and then prints the integer part and the decimal part separately. For example, if the user enters 2.718, the program print: Integer part =2 and decimal part=0.718

```
#include<iostream>
using namespace std;

int main () {
float x,z;
int y;

   cout<<"Enter the decimal number:";
   cin>>x;

y=x;                /* if x=10.5 than y=10.5 '(y=10)' z=(10.5-10) '(z=0.5)' */
z=(x-y);

    cout<<"Integer part:"<<y<<endl;
    cout<<"Fractional part:"<<z;

return 0;
}
```