////////////////////////PART 4//

1. Write a program in C# Sharp to display the first 10 natural numbers.
Expected Output :
1 2 3 4 5 6 7 8 9 10

2. Write a C# Sharp program to find the sum of the first 10 natural numbers.
Expected Output :
The first 10 natural number is :
1 2 3 4 5 6 7 8 9 10
The Sum is : 55

3. Write a C# Sharp program that displays the sum of n natural numbers.
Test Data : 7
Expected Output :
The first 7 natural number is :
1 2 3 4 5 6 7
The Sum of Natural Number upto 7 terms : 28

4. Write a C# Sharp program to read 10 numbers and find their average and sum.
Test Data :
Input the 10 numbers :
Number-1 :2
...
Number-10 :2
Expected Output :
The sum of 10 no is : 51
The Average is : 5.100000

5. Write a C# Sharp program to display the cube of an integer up to given number.
Test Data :

Input number of terms : 5
Expected Output :
Number is : 1 and cube of the 1 is :1
Number is : 2 and cube of the 2 is :8
Number is : 3 and cube of the 3 is :27
Number is : 4 and cube of the 4 is :64
Number is : 5 and cube of the 5 is :125

6. Write a program in C# Sharp to display the multiplication table of a given integer.
Test Data :
Input the number (Table to be calculated) : 15
Expected Output :
15 X 1 = 15
...
...
15 X 10 = 150

7. Write a program in C# Sharp to display the multiplication table vertically from 1 to n.
Test Data :
Input upto the table number starting from 1 : 8
Expected Output :
Multiplication table from 1 to 8
1x1 = 1, 2x1 = 2, 3x1 = 3, 4x1 = 4, 5x1 = 5, 6x1 = 6, 7x1 = 7, 8x1 = 8
...
1x10 = 10, 2x10 = 20, 3x10 = 30, 4x10 = 40, 5x10 = 50, 6x10 = 60, 7x10 = 70, 8x10 = 80

8. Write a C# Sharp program to display the n terms of odd natural numbers and their sums.
Test Data
Input number of terms : 10
Expected Output :

The odd numbers are :1 3 5 7 9 11 13 15 17 19
The Sum of odd Natural Number upto 10 terms : 100

9. Write a program in C# Sharp to display a right angle triangle with an asterisk.
The pattern like :
```
*
**
***
****
```

10. Write a program in C# Sharp to display a pattern like a right angle triangle with a number.
The pattern like :
```
1
12
123
1234
```

11. Write a program in C# Sharp to make such a pattern like a right angle triangle with a number which repeats a number in a row.
The pattern like :
```
1
22
333
4444
```

12. Write a C# Sharp program to make such a pattern like a right angle triangle with the number increased by 1.
The pattern like :
```
1
```

2 3
4 5 6
7 8 9 10

13. Write a program in C# Sharp to make such a pattern like a pyramid with numbers increasing by 1.
```
 1
 2 3
 4 5 6
7 8 9 10
```


14. Write a program in C# Sharp to make such a pattern like a pyramid with an asterisk.
```
   *
  * *
 * * *
* * * *
```


15. Write a C# Sharp program to calculate the factorial of a given number.
Test Data :
Input the number : 5
Expected Output :
The Factorial of 5 is: 120

16. Write a program in C# Sharp to display the n terms of even natural number and their sum.
Test Data :
Input number of terms : 5
Expected Output :
The even numbers are :2 4 6 8 10

The Sum of even Natural Number upto 5 terms : 30

17. Write a program in C# Sharp to make such a pattern like a pyramid with a number which will repeat the number in the same row.
```
 1
  2 2
 3 3 3
4 4 4 4
```

18. Write a program in C# Sharp to find the sum of the series [1-X^2/2!+X^4/4!- ....].
Test Data :
Input the Value of x :2
Input the number of terms : 5
Expected Output :
the sum = -0.415873
Number of terms = 5
value of x = 2.000000

19. Write a program in C# Sharp to display the n terms of harmonic series and their sum.
1 + 1/2 + 1/3 + 1/4 + 1/5 ... 1/n terms
Test Data :
Input the number of terms : 5
Expected Output :
1/1 + 1/2 + 1/3 + 1/4 + 1/5 +
Sum of Series upto 5 terms : 2.283334

20. Write a program in C# Sharp to display the pattern like pyramid using an asterisk and each row contain an odd number of an asterisks.
```
  *
 ***
```

*****

21. Write a program in C# Sharp to display the sum of the series [9 + 99 + 999 + 9999 ...].
Test Data :
Input the number or terms :5
Expected Output :
9 99 999 9999 99999
The sum of the series = 111105

22. Write a program in C# Sharp to print Floyd's Triangle.
1
01
101
0101
10101

23. Write a program in C# Sharp to display the sum of the series [1+x+x^2/2!+x^3/3!+....].
Test Data :
Input the value of x :3
Input number of terms : 5
Expected Output :
The sum is : 16.375000
Number of terms = 5
The value of x = 3.000000

24. Write a program in C# Sharp to find the sum of the series [x - x^3 + x^5 - x^7 + x^9 -.....].
Test Data :
Input the value of x : 2
Input number of terms : 5
The sum = 410

Number of terms = 5
The value of x = 2

25. Write a C# Sharp program that displays the n terms of square natural numbers and their sum.
1 4 9 16 ... n Terms
Test Data :
Input the number of terms : 5
Expected Output :
The square natural upto 5 terms are :1 4 9 16 25
The Sum of Square Natural Number upto 5 terms = 55