

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 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 program in C# Sharp to display n terms of natural number and their sum. Go to the editor

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 program in C# Sharp to read 10 numbers from keyboard and find their sum and average.

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 program in C# Sharp to display the cube of the number upto given an integer.

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 program in C# Sharp to display the n terms of odd natural number and their sum.

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 the pattern like right angle triangle using an asterisk.

The pattern like :

*

**

10. Write a program in C# Sharp to display the pattern like 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 right angle triangle with a number which will repeat a number in a row.

The pattern like :

1
22
333
4444

12. Write a program in C# Sharp to make such a pattern like right angle triangle with 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 increased 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 [$1 - X^2/2! + X^4/4! - \dots$].

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.

$1 + 1/2 + 1/3 + 1/4 + 1/5 \dots 1/n$ 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 the 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 [$x - x^3 + x^5 +$].

Test Data :

Input the value of x :2

Input number of terms : 5

Expected Output :

The sum = 0.909347

Number of terms = 5

The value of x = 2.000000

25. Write a program in C# Sharp to display the n terms of square natural number 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

26. Write a program in C# Sharp to find the sum of the series 1 +11 + 111 + 1111 + .. n terms.

Test Data :

Input the number of terms : 5

Expected Output :

1 + 11 + 111 + 1111 + 11111 +

The Sum is : 12345

27. Write a C# Sharp program to check whether a given number is perfect number or not.

Test Data :

Input the number : 56

Expected Output :

The positive divisor : 1 2 4 7 8 14 28

The sum of the divisor is : 64

So, the number is not perfect.

28. Write a C# Sharp program to find the perfect numbers within a given range of number.

Test Data :

Input the starting range or number : 1

Input the ending range of number : 50

Expected Output :

The Perfect numbers within the given range : 6 28

29. Write a C# Sharp program to check whether a given number is an Armstrong number or not.

Test Data :

Input a number: 153

Expected Output :

153 is an Armstrong number.

30. Write a C# Sharp program to find the Armstrong number for a given range of number.

Test Data :

Input starting number of range: 1
Input ending number of range : 1000
Expected Output :
Armstrong numbers in given range are: 1 153 370 371 407

31. Write a program in C# Sharp to display the pattern like a diamond.

```
*  
***  
*****  
*****  
*****  
*****  
*****  
***  
*
```

32. Write a C# Sharp program to determine whether a given number is prime or not.

Test Data :
Input a number: 13
Expected Output :
13 is a prime number.

33. Write a C# Sharp program to display by Pascal's triangle.

Test Data :
Input number of rows: 5
Expected Output :

```
1 1 1 1 2 1 1 3 3 1 1 4 6 4 1
```

34. Write a program in C# Sharp to find the prime numbers within a range of numbers.

Test Data :
Input starting number of range: 1
Input ending number of range : 50
Expected Output :
The prime number between 1 and 50 are :
2 3 5 7 11 13 17 19 23 29 31 37 41 43 47

35. Write a program in C# Sharp to display the first n terms of Fibonacci series.

Fibonacci series 0 1 2 3 5 8 13

Test Data :

Input number of terms to display : 10

Expected Output :

Here is the Fibonacci series upto to 10 terms :

0 1 1 2 3 5 8 13 21 34

36. Write a program in C# Sharp to display the such a pattern for n number of rows using a number which will start with the number 1 and the first and a last number of each row will be 1.

1
121
12321

37. Write a program in C# Sharp to display the number in reverse order.

Test Data :

Input a number: 12345

Expected Output :

The number in reverse order is : 54321

38. Write a program in C# Sharp to check whether a number is a palindrome or not.

Test Data :

Input a number: 121

Expected Output :

121 is a palindrome number.

39. Write a program in C# Sharp to find the number and sum of all integer between 100 and 200 which are divisible by 9.

Expected Output :

Numbers between 100 and 200, divisible by 9 :

108 117 126 135 144 153 162 171 180 189 198

The sum : 1683

40. Write a C# Sharp Program to display the following pattern using the alphabet.

A
A B A

A B C B A
A B C D C B A

41. Write a program in C# Sharp to convert a decimal number into binary without using an array.

Test Data :

Enter a number to convert : 25

Expected Output :

The Binary of 25 is 11001.

42. Write a program in C# Sharp to convert a binary number into a decimal number without using array, function and while loop.

Test Data :

Input a binary number : 1010101

Expected Output :

The Binary Number : 1010101

The equivalent Decimal Number : 85

43. Write a C# Sharp program to find HCF (Highest Common Factor) of two numbers.

Test Data :

Input 1st number for HCF: 24

Input 2nd number for HCF: 28

Expected Output :

HCF of 24 and 28 is : 4

44. Write a program in C# Sharp to find LCM of any two numbers using HCF.

Test Data :

Input 1st number for LCM: 15

Input 2nd number for LCM: 20

Expected Output :

The LCM of 15 and 20 is : 60

45. Write a program in C# Sharp to find LCM of any two numbers.

Test Data :

Input 1st number for LCM: 15

Input 2nd number for LCM: 20

Expected Output :

The LCM of 15 and 20 is : 60

46. Write a program in C# Sharp to convert a binary number into a decimal number using math function.

Test Data :

Input the binary number :1010100

Expected Output :

The Binary Number : 1010100

The equivalent Decimal Number is : 84

47. Write a C# Sharp program to check whether a number is a Strong Number or not.

Test Data :

Input a number to check whether it is Strong number: 15

Expected Output :

15 is not Strong number.

48. Write a C# Sharp program to find Strong Numbers within a range of numbers.

Test Data :

Input starting range of number : 1

Input ending range of number: 200

Expected Output :

The Strong numbers are :

1 2 145

49. Write a C# Sharp program to find out the sum of in A.P. series.

Test Data :

Input the starting number of the A.P. series: 1

Input the number of items for the A.P. series: 10

Input the common difference of A.P. series: 4

Expected Output :

The Sum of the A.P. series are :

$1 + 5 + 9 + 13 + 17 + 21 + 25 + 29 + 33 + 37 = 190$

50. Write a program in C# Sharp to convert a decimal number into octal without using an array.

Test Data :

Enter a number to convert : 79

Expected Output :

The Octal of 79 is 117.

51. Write a program in C# Sharp to convert an octal number to decimal without using array.

Test Data :

Input an octal number (using digit 0 - 7) :745

Expected Output :

The Octal Number : 745

The equivalent Decimal Number : 485

52. Write a program in C# Sharp to find the Sum of GP series.

Test Data :

Input the first number of the G.P. series: 1

Input the number or terms in the G.P. series: 5

Input the common ratio of G.P. series: 2

Expected Output :

The numbers for the G.P. series:

1 2 4 8 16 32

The tn terms of G.P. : 16.000000

The Sum of the G.P. series : 63.000000

53. Write a program in C# Sharp to convert a binary number to octal.

Test Data :

Input a binary number :1001

Expected Output :

The Binary Number : 1001

The equivalent Octal Number : 11

54. Write a program in C# Sharp to convert an octal number into binary.

Test Data :

Input an octal number :11

Expected Output :

The Octal Number : 11

The equivalent Binary Number : 1001

55. Write a program in C# Sharp to convert a decimal number to hexadecimal. .

Test Data :

Input any Decimal number: 79

Expected Output :

The equivalent Hexadecimal Number : 4F

56. Write a program in C# Sharp to Check Whether a Number can be Express as Sum of Two Prime Numbers.

Test Data :

Input a positive integer: 16

Expected Output :

16 = 3 + 13

16 = 5 + 11

57. Write a program in C# Sharp to print a string in reverse order.

Test Data :

Input a string to reverse : Welcome

Expected Output :

Reversed string is: emocleW

58. Write a C#Sharp program to display alphabet pattern like A with an asterisk.

Reversed string is:Display the pattern like 'A' with an asterisk:

```
***
*  *
*  *
*****
*  *
*  *
*  *
*  *
```

59. Write a C#Sharp program to display alphabet pattern like B with an asterisk.

Display the pattern like 'B' with an asterisk:

```
****
*  *
*  *
****
*  *
*  *
****
```

60. Write a C#Sharp program to display alphabet pattern like C with an asterisk.

Display the pattern like 'C' with an asterisk:

```
***  
*  *  
*  
*  
*  
*  *  
***
```

61. Write a C#Sharp program to display alphabet pattern like D with an asterisk.

Display the pattern like 'D' with an asterisk:

```
****  
*  *  
*  *  
*  *  
*  *  
*  *  
****
```

62. Write a C#Sharp program to display alphabet pattern like E with an asterisk.

Display the pattern like 'E' with an asterisk:

```
*****  
*  
*  
****  
*  
*  
*****
```

63. Write a C#Sharp program to display alphabet pattern like F with an asterisk.

Display the pattern like 'F' with an asterisk:

```
*****
*
*
****
*
*
*
```

64. Write a C#Sharp program to display alphabet pattern like G with an asterisk.

Display the pattern like 'G' with an asterisk:

```
***
*  *
*
* ***
*  *
*  *
***
```

65. Write a C#Sharp program to display alphabet pattern like H with an asterisk.

Display the pattern like 'H' with an asterisk:

```
*  *
*  *
*  *
*****
*  *
*  *
*  *
```

66. Write a C#Sharp program to display alphabet pattern like I with an asterisk.

Display the pattern like 'I' with an asterisk:

```
*****  
*  
*  
*  
*  
*  
*****
```

67. Write a C#Sharp program to display alphabet pattern like J with an asterisk.

Display the pattern like 'J' with an asterisk:

```
***  
*  
*  
*  
*  
* *  
*
```

68. Write a C#Sharp program to display alphabet pattern like K with an asterisk.

Display the pattern like 'K' with an asterisk:

```
* *  
* *  
* *  
**  
* *  
* *  
* *
```

69. Write a C#Sharp program to display alphabet pattern like L with an asterisk.

Display the pattern like 'L' with an asterisk:

```
*  
*  
*  
*  
*  
*  
*****
```

70. Write a C#Sharp program to display alphabet pattern like M with an asterisk.
Display the pattern like 'M' with an asterisk:

```
* *  
* *  
** **  
* * *  
* *  
* *  
* *
```

71. Write a C#Sharp program to display alphabet pattern like N with an asterisk.

Display the pattern like 'N' with an asterisk:

```
* *  
* *  
** *  
* * *  
* **  
* *  
* *
```

72. Write a C#Sharp program to display alphabet pattern like O with an asterisk.

Display the pattern like 'O' with an asterisk:

```

***
*  *
*  *
*  *
*  *
*  *
***

```

73. Write a C#Sharp program to display alphabet pattern like P with an asterisk.

Display the pattern like 'P' with an asterisk:

```

****
*  *
*  *
****
*
*
*

```

74. Write a C#Sharp program to display alphabet pattern like Q with an asterisk.

Display the pattern like 'Q' with an asterisk:

```

***
*  *
*  *
*  *
* * *
*  *
** *

```

75. Write a C#Sharp program to display alphabet pattern like R with an asterisk.

Display the pattern like 'R' with an asterisk:

```

****

```

```
* *  
* *  
****  
* *  
* *  
* *
```

76. Write a C#Sharp program to display alphabet pattern like S with an asterisk.

Display the pattern like 'S' with an asterisk:

```
****  
*  
*  
***  
  *  
  *  
****
```

77. Write a C#Sharp program to display alphabet pattern like T with an asterisk.

Display the pattern like 'T' with an asterisk:

```
*****  
*  
*  
*  
*  
*  
*
```

78. Write a C#Sharp program to display alphabet pattern like U with an asterisk.

Display the pattern like 'U' with an asterisk:

```
* *  
* *
```

```
* *  
* *
```

```
* *  
* *  
***
```

79. Write a C#Sharp program to display alphabet pattern like V with an asterisk.

Display the pattern like 'V' with an asterisk:

```
* *  
* *  
* *  
* *  
* *  
* *  
*  
*
```

80. Write a C#Sharp program to display alphabet pattern like W with an asterisk.

Display the pattern like 'W' with an asterisk:

```
* *  
* *  
* *  
* *  
* * *  
* * *  
* *
```

81. Write a C#Sharp program to display alphabet pattern like X with an asterisk.

Display the pattern like 'X' with an asterisk:

```
* *  
* *
```

```
* *  
*  
* *  
* *  
* *
```

82. Write a C#Sharp program to display alphabet pattern like Y with an asterisk.

Display the pattern like 'Y' with an asterisk:

```
* *  
* *  
* *  
*  
*  
*  
*
```

83. Write a C#Sharp program to display alphabet pattern like Z with an asterisk.

Display the pattern like 'Z' with an asterisk:

```
*****  
*  
*  
*  
*  
*  
*****
```