1. Write a program in C to display the first 10 natural numbers. .

Expected Output :

1 2 3 4 5 6 7 8 9 102. Write a C 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 : 553. Write a program in C to display n terms of natural number and their sum..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 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 : 5.1000005. Write a program in C 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 :1256. Write a program in C 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 = 1507. Write a program in C to display the multipliaction 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

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1x10 = 10, 2x10 = 20, 3x10 = 30, 4x10 = 40, 5x10 = 50, 6x10 = 60, 7x10 = 70, 8x10 = 80 8. Write a program in C to display the n terms of odd natural number and their sum . .Test Data Input number of terms : 10Expected 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 to display the pattern like right angle triangle using an asterisk. .

The pattern like :

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10. Write a program in C to display the pattern like right angle triangle with a number. .

The pattern like :1121231234

11. Write a program in C 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 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 1013. Write a program in C 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 to make such a pattern like a pyramid with an asterisk. .

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15. Write a C 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 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 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 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 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 to display the pattern like a pyramid using asterisk and each row contain an odd number of asterisks. . \*

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21. Write a program in C 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 saries = 111105

22. Write a program in C to print the Floyd's Triangle. .

1

01

101

0101

10101

23. Write a program in C 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 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 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 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 program to check whether a given number is a 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 program to find the perfect numbers within a given number of range. .

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 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 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 to display the pattern like a diamond. .

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32. Write a C 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 program to display 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 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 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 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 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 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 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 Program to display the pattern like pyramid 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 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 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 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 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 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 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 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 a Strong number.

48. Write a C 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 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 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 to convert an octal number to a decimal without using an array. .

Test Data :

Input an octal number (using digit 0 - 7) :745 Expected Output : The Octal Number : 745 The equivalent Decimal Number : 48

52. Write a program in c 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 n terms of G.P. : 16.000000

The Sum of the G.P. series : 63.000000

53. Write a program in C 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 to convert an octal number into binary. .Test Data : Input an octal number (using digit 0 - 7) :57 Expected Output :The Octal Number : 57 The equivalent Binary Number : 101111

55. Write a program in C 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 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 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 program to find the length of a string without using the library function. .

Test Data : Input a string : welcome Expected Output :The string contains 7 number of characters. So, the length of the string welcome is : 7

59. Write a program in C to check Armstrong number of n digits. .

Test Data :

Input an integer : 1634

Expected Output :

1634 is an Armstrong number.