Sr. No	Program Definition
1	Write a program in C to display the cube of the number up to 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
2	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 = 150
3	Write a program in C 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
4	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
5	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 up to 5 terms : 2.283334
6	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
7	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 values of the series: 2 -8 32 -128 512 The sum = 410
8	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.
9	Write a c program to find the perfect numbers within a given number of ranges. 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
10	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.
11	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
12	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 up to 10 terms : 0 1 1 2 3 5 8 13 21 34
13	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
14	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.
15	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
16	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.
17	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
18	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
19	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
20	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

21.	Write a C program to read a matrix A (MxN) and to find the following using functions a) Sum of the elements of each row b) Sum of the elements of each column c) Find the sum of all the elements of the matrix Output the computed results with suitable headings.
22.	C Program to accept two matrices and check if they are equal or not?. Program will accept the two matrices, and return true if their order and their elements are equal, i.e. for all , if a[i][j]==b[i][j].
23.	C Program to check if a given matrix is an identity matrix or not. If I is theIdentity Matrix,then for any matrix A, IA=AI=A. Program will check the given matrix is identity or not, and prints the appropriate message.
24.	C program to find the frequency of odd numbers and even numbers in the input of a matrix. Program will check the element type, if Matrix element is even, it ads 1 to even counter otherwise ad 1 to odd counter.
25.	C Program to interchange the main diagonal elements of the matrix. This Program will accept a matrix of order M x N and store its elements and interchange the main diagonal elements of the matrix with that of the secondary diagonal elements.
26.	C Program to sort the matrix rows and columns. This C program accept a order MxN Matrix, and sort all rows of the matrix in ascending order and all columns in descending order. In this program, we use the for statement to read two dimension arrays.
27.	C program to accept a matrix and determine whether it is a sparse matrix or not?. A sparse matrix is a matrix, which has more zero elements than nonzero elements.
28.	C Program to find the Inverse of a Matrix. To find the Matrix Inverse, matrix should be a square matrix and Matrix Determinant is should not Equal to Zero. if A is a Square matrix and |A|!=0, then AA'=I (I Means Identity Matrix).
29.	Write c programs for following given patterns:

1.	* * * * * * * * * * ***** ***** *****
2.	* * * * * * * * * * * * * * *
3.	* * * * * * * * * * * * * * *
4.	* * * * * * * * * * * *

	* * * * * * * * * * * * * * * * * *
5.	* * * * * * * * * * * * * * *
6.	* * * * * * * * * * * * * * *
7.	* *
8.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
9.	0 1 0 1 2 1 0 1 2 3 2 1 0 1 2 3 4 3 2 1 0 1 2 3 4 5 4 3 2 1 0 1 2 3 4 5
10.	1 2 2 3 3 3 4 4 4 4 5 5 5 5 5
11.	1 1 2 1 2 3 1 2 3 4 1 2 3 45
12.	1 1 2 3 1 2 3 4 5 1 2 3 4 5 6 7

	1 2 3 4 5 6 7 8 9
13.	A B C D E F G G F E D C B A A B C D E F F E D C B A A B C D E E D C B A A B C D D C B A A B C C B A A B B A A A
14.	AAA AAB AAC ABA ABB ABC ACA ACB ACC BAA BAB BAC BBA BBB BBC BCA BCB BCC CAA CAB CAC CBA CBB CBC CCA CCB CCC
15.	11111 2222 333 44 5
16.	1234567 12345 123 1
17.	55555 45555 34555 23455 12345
18.	1 10 101 1010 10101
19.	12344321 123**321 12****21 1******1
20.	5432* 543*1 54*21 5*321 *4321
21.	0 909 89098 7890987 678909876 56789098765

	4567890987654 345678909876543 23456789098765432 1234567890987654321
22.	1 21 321 4321 54321
23.	1 1 12 21 123 321 1234 4321 1234554321
24.	1 2*2 3*3*3 4*4*4*4 4*4*4*4 3*3*3 2*2 1
25.	1 232 45654 78910987
26.	11 12 13 13 14 15 14 15 16 17
27.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
28.	1 212 32123 4321234
29.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
30.	1 23

	345 4567 56789
31.	11111 0000 111 00 1
32.	1234 2341 3421 4321
33.	11111 1 1 1 1 1 1 11111
34.	1 4 9 16 25 36 49 64 81 100 121 144 169 196 225 256 289 324 361 400 441 484 529 576 625
35.	1 123 12345 1234567 123456789 1234567 12345 123 1
36.	1 1 2 1 2 3 1 2 3 4 1 2 3 4 5
37.	*000*000* 0*00*00*0 00*0*0*00 000***000
38.	4444444 4333334 4322234 4321234 4322234 4333334

	4444444
39.	1 2 4 3 6 9 4 8 12 16 5 10 15 20 25 6 12 18 24 30 36 7 14 21 28 35 42 49 8 16 24 32 40 48 56 64 9 18 27 36 45 54 63 72 81 10 20 30 40 50 60 70 80 90 100
40.	1 1 1 1 2 1 1 3 3 1 1 4 6 4 1
41.	E DE CDE BCDE ABCDE
42.	ABCDE BCDE CDE DE E
43.	EDCBA EDCB EDC ED E
44.	EDCBA DCBA CBA BA A
45.	EEEEE DDDD CCC BB A
46.	AAAAA BBBB CCC DD E

	47.	A AB ABC ABCD ABCDE
	48.	E DE CDE BCDE ABCDE
	49.	1 1 2 3 5 8 13 21 34 55 89 144 233 377 610
	50.	11111 10001 10001 10001 11111