

Competitive Coding – Patterns & Series – Level 1

1. *****

2. **1**
2 3
4 5 6
7 8 9 10
3. **0**
1 0
1 0 1
0 1 0 1
4. **1**
3 2
4 5 6
10 9 8 7
5. **1**
3 2
6 5 4
10 9 8 7
6. **1**
-2 -3
4 5 6
-7 -8 -9 -10
7. **1**
-2 3
4 -5 6
-7 8 -9 10
8. *****

9. *****
*** ***
*** ***
*** ***

10. *****

11.

WAP in C++ to find $\sin x$ ($x - (x^3/3!) + (x^5/5!) - (x^7/7!) + ..$)

Input :

90

1000

Output :

1

Input Description :

An integer x, denoting angle in degree .

An integer n, denoting the number of iteration.

12.

Write a program in C++ to print and find sum of first 2k terms of series 2,10,6,20,18,40,54,80.

Input :

5

Output :

2,10,6,20,18,40,54,80,162,160.

Sum=552

Input Description :

An integer k.

13. Write a program in C++ to print next 10 terms of series AZ, CY, EX, GW, IV

14. Write a program in C++ to find e^x using series $1 + (x/1!) + (x^2/2!) + (x^3/3!) + \dots$

15. Write a program in C++ to find nth term of geometric progression

2,4,8,16,32,....

16. Write a program in C++ to find sum till nth term of geometric progression

2,4,8,16,32,...

17.

Write a program in C++ to find the sum and n terms of arithmetic series given the first three terms of series.

Input :

5

1 2 3

Output :

1 2 3 4 5

15

Input Description :

First line denotes the number of terms in Arithmetic series. Next line contains the first three term of Arithmetic series.

Output Description :

First line denotes the n terms of the given Arithmetic series.

Second line input the sum of n terms of given series.