

Basic Number series problems in C

1) Find Nth term of the series 3, 14, 39, 84...

Input: 3

Output: 39

For N = 3

$$\begin{aligned}\text{Nth term} &= (3 \times 3 \times 3) + (3 \times 3) + 3 \\ &= 39\end{aligned}$$

2) Find Nth term of the series 1, 1, 2, 6, 24...

Input: 3

Output: 2

For N = 3

$$\begin{aligned}\text{Nth term} &= (N-1)! \\ &= 2\end{aligned}$$

3) Find the Nth term of the series 14, 28, 20, 40,.....

Input : N =4

Output : 40(for even i,double the previous term

For odd i subtract 8 from the previous term)

4) Find n-th term of series 2, 10, 30, 68, 130

Input: n = 4

Output: 68($4*4*4+4$)

5) Find the Nth term of the series 1, 5, 32, 288 ...

Input: N = 3

Output: 32

Explanation:

$$\begin{aligned} \text{3rd term} &= 3^3 + 2^2 + 1^1 \\ &= 32 \end{aligned}$$

