

# Tetranacci Number I

Problem

Submissions

Leaderboard

Discussions

The **Tetranacci sequence** is an extension of the well-known Fibonacci sequence, incorporating four previous terms instead of two.

The Tetranacci sequence  $T_n$  is defined as follows:

- $T_0 = 0, T_1 = 1, T_2 = 1, T_3 = 2$
- For  $n \geq 4$ ,  $T_n = T_{n-1} + T_{n-2} + T_{n-3} + T_{n-4}$

Given an integer  $n$ , return the value of  $T_n$

**Note :** You must solve this problem using **Recursion. (Top Down)**

## Input Format

A single integer  $n$  representing the position in the Tetranacci sequence.

## Constraints

- $0 \leq n \leq 30$
- The result is guaranteed to fit within a 32-bit integer (  $\leq 2^{31}-1$  )

## Output Format

Print a single integer, the value of  $T_n$

## Sample Input 0

4

## Sample Output 0

4

## Explanation 0

$$T_4 = T_3 + T_2 + T_1 + T_0 = 2 + 1 + 1 + 0 = 4$$

## Sample Input 1

5

## Sample Output 1

## Explanation 1

$$T_5 = T_4 + T_3 + T_2 + T_1 = 4 + 2 + 1 + 1 = 8$$

[f](#) [t](#) [in](#)Submissions: [267](#)

Max Score: 20

Difficulty: Easy

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C++

```
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

Line: 1 Col: 1

[Upload Code as File](#) ☐ Test against custom input

Run Code

Submit Code