

Started on	Friday, 3 October 2025, 9:34 PM
State	Finished
Completed on	Friday, 3 October 2025, 9:38 PM
Time taken	4 mins 51 secs
Grade	10.00 out of 10.00 (100%)

Question 1 | Correct Mark 10.00 out of 10.00**Playing with Numbers:**

Ram and Sita are playing with numbers by giving puzzles to each other. Now it was Ram term, so he gave Sita a positive integer 'n' and two numbers 1 and 3. He asked her to find the possible ways by which the number n can be represented using 1 and 3. Write any efficient algorithm to find the possible ways.

Example 1:

Input: 6

Output: 6

Explanation: There are 6 ways to 6 represent number with 1 and 3

$1+1+1+1+1+1$

$3+3$

$1+1+1+3$

$1+1+3+1$

$1+3+1+1$

$3+1+1+1$

Input Format

First Line contains the number n

Output Format

Print: The number of possible ways 'n' can be represented using 1 and 3

Sample Input

6

Sample Output

6

Answer: (penalty regime: 0 %)

```
1  #include<stdio.h>
2  long long countways(int n)
3  {
4      long long dp[n+1];
5      dp[0]=1;
6      for (int i=1;i<=n;i++)
7      {
8          dp[i]=0;
9          if(i-1>=0)
10             dp[i]+=dp[i-1];
11             if(i-3>=0)
12                 dp[i]+=dp[i-3];
13     }
14     return dp[n];
15 }
16 int main()
17 {
18     int n;
19     scanf("%d",&n);
20     if(n<0)
21     {
22         return 1;
23     }
24     long long ways=countways(n);
25     printf("%lld",ways);
26     return 0;
27 }
```

	Input	Expected	Got	
✓	6	6	6	✓
✓	25	8641	8641	✓
✓	100	24382819596721629	24382819596721629	✓

Passed all tests! ✓

Correct

Marks for this submission: 10.00/10.00.