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

```c
#include <stdio.h>

int main() {
    int n;
    scanf("%d", &n);


    long long dp[n + 1];

    dp[0] = 1;

    for (int i = 1; i <= n; i++) {
        dp[i] = dp[i - 1];
        if (i >= 3) {
            dp[i] += dp[i - 3];
        }
    }

    printf("%lld\n", dp[n]);
    return 0;
}

```

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

Passed all tests! ✔

Correct

Marks for this submission: 10.00/10.00.