

230701092

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<b>Started on</b>	Tuesday, 22 October 2024, 1:54 PM
<b>State</b>	Finished
<b>Completed on</b>	Tuesday, 22 October 2024, 2:15 PM
<b>Time taken</b>	20 mins 24 secs
<b>Grade</b>	<b>10.00</b> out of 10.00 ( <b>100%</b> )

## 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 puz(int n){
3     long p[n+1];
4     p[0]=1;
5     p[1]=1;
6     p[2]=1;
7     p[3]=2;
8     for(int i=4;i<=n;i++){
9         p[i]=p[i-1]+p[i-3];
10    }
11    return p[n];
12 }
13 int main(){
14     int n;
15     scanf("%d",&n);
16     long r=puz(n);
17     printf("%li",r);
18 }
19
20

```

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

Passed all tests! ✓

**Correct**

Marks for this submission: 10.00/10.00.

[◀ 5-Implementation of Quick Sort](#)

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[2-DP-Playing with chessboard ▶](#)