

Count the Number of Hops

A frog is attempting to reach the top of a staircase with n steps. The frog can jump either 1, 2, or 3 steps at a time. The objective is to calculate the number of distinct ways the frog can reach the top of the staircase, given n steps.

The rules of the hops are as follows:

1. The frog starts at the bottom of the staircase (step 0).
2. From any given step, the frog can:
 - Jump 1 step forward
 - Jump 2 steps forward
 - Jump 3 steps forward
3. The frog continues jumping until it reaches exactly the n th step.
4. If there are multiple distinct sequences of jumps that allow the frog to reach the n th step, each unique sequence counts as a separate way.

Input: $n = 3$

Output: 4

Explanation: Below are the four ways

=> 1 step + 1 step + 1 step

=> 1 step + 2 step

=> 2 step + 1 step

=> 3 step

No.	Sample Input	Sample Output
1	3	4
2	4	7