

Climbing Stairs

You are climbing a staircase. It takes n steps to reach the top.

Each time you can either climb 1 or 2 steps. In how many distinct ways can you climb to the top?

Example 1:

Input: $n = 2$

Output: 2

Explanation: There are two ways to climb to the top.

1. 1 step + 1 step

2. 2 steps

Example 2:

Input: $n = 3$

Output: 3

Explanation: There are three ways to climb to the top.

1. 1 step + 1 step + 1 step

2. 1 step + 2 steps

3. 2 steps + 1 step

Constraints:

- $1 \leq n \leq 45$