

ASK/VIEW DOUBT

SOLUTION

Problem

Result

Code : No. of balanced BTs

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Given an integer h, find the possible number of balanced binary trees of height h. You just need to return the count of possible binary trees which are balanced.

This number can be huge, so return output modulus $10^9 + 7$.

Write a simple recursive solution.

Input Format :

Integer h

Output Format :

Count % $10^9 + 7$

Input Constraints :

$1 \leq h \leq 40$

Sample Input 1:

3

Sample Output 1:

15

Sample Input 2:

4

Sample Output 2:

315

▶

1#include<cmath>

2int balancedBTs(int h) {

3/* Don't write main().

4Don't read input, it is passed as function argument.

5Return the output and don't print it.

6*/

7

8if(h<=1){

9return 1;

10}

11int mod = pow(10,9)+7;

12long x = balancedBTs(h-1);

13long y = balancedBTs(h-2);

14

15long temp1 = 2*x*y;

16long temp2 = x*x;

17return (temp1+temp2)%mod;

18}

19

< PREVIOUS

> NEXT

CUSTOM INPUT

SUBMIT SOLUTION