Given *n*, how many structurally unique **BST's** (binary search trees) that store values 1 ... *n*?

**Example:**

**Input:** 3

**Output:** 5

**Explanation:**

Given *n* = 3, there are a total of 5 unique BST's:

1 3 3 2 1

\ / / / \ \

3 2 1 1 3 2

/ / \ \

2 1 2 3