Our Solution(s) Run Code

Solution 1 Solution 2 Solution 3

```cpp
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using namespace std;

// Upper Bound: O((n*(2n)!)/(n!(n+1)!)) time | O(n) space
int numberOfBinaryTreeTopologies(int n) {
  if (n == 0) {
    return 1;
  }
  int numberOfTrees = 0;
  for (int leftTreeSize = 0; leftTreeSize < n; leftTreeSize++) {
    int rightTreeSize = n - 1 - leftTreeSize;
    int numberOfLeftTrees = numberOfBinaryTreeTopologies(leftTreeSize)
    int numberOfRightTrees = numberOfBinaryTreeTopologies(rightTreeSiz
    numberOfTrees += numberOfLeftTrees * numberOfRightTrees;
  }
  return numberOfTrees;
}

```

Your Solutions Run Code

Solution 1 Solution 2 Solution 3

```cpp
using namespace std;

int numberOfBinaryTreeTopologies(int n) {
  // Write your code here.
  return -1;
}

```

Our Tests

Custom Output Submit Code

Run or submit code when you're ready.