1739. Building Boxes

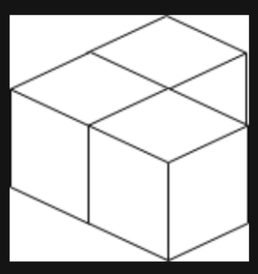
Description

You have a cubic storeroom where the width, length, and height of the room are all equal to `n` units. You are asked to place `n` boxes in this room where each box is a cube of unit side length. There are however some rules to placing the boxes:

- You can place the boxes anywhere on the floor.
- If box `x` is placed on top of the box `y`, then each side of the four vertical sides of the box `y` **must** either be adjacent to another box or to a wall.

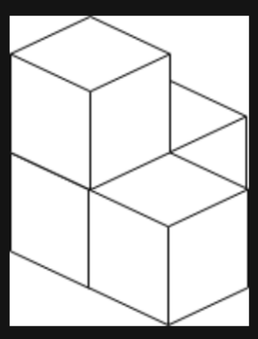
Given an integer `n`, return *the **minimum** possible number of boxes touching the floor.*

Example 1:



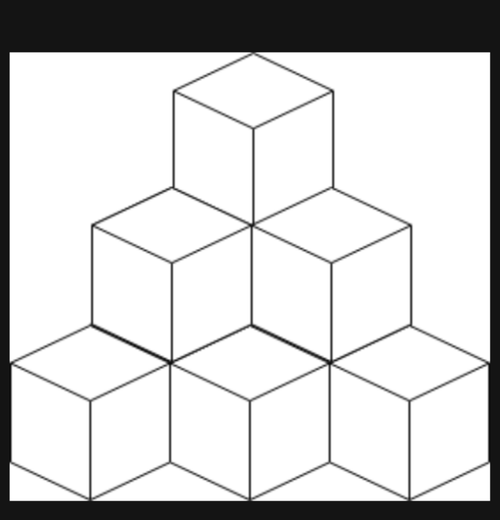
```
Input: n = 3
Output: 3
Explanation: The figure above is for the placement of the three boxes.
These boxes are placed in the corner of the room, where the corner is on the left side.
```

Example 2:



```
Input: n = 4
Output: 3
Explanation: The figure above is for the placement of the four boxes.
These boxes are placed in the corner of the room, where the corner is on the left side.
```

Example 3:



```
Input: n = 10
Output: 6
Explanation: The figure above is for the placement of the ten boxes.
These boxes are placed in the corner of the room, where the corner is on the back side.
```

Constraints:

- `1 <= n <= 10^9`