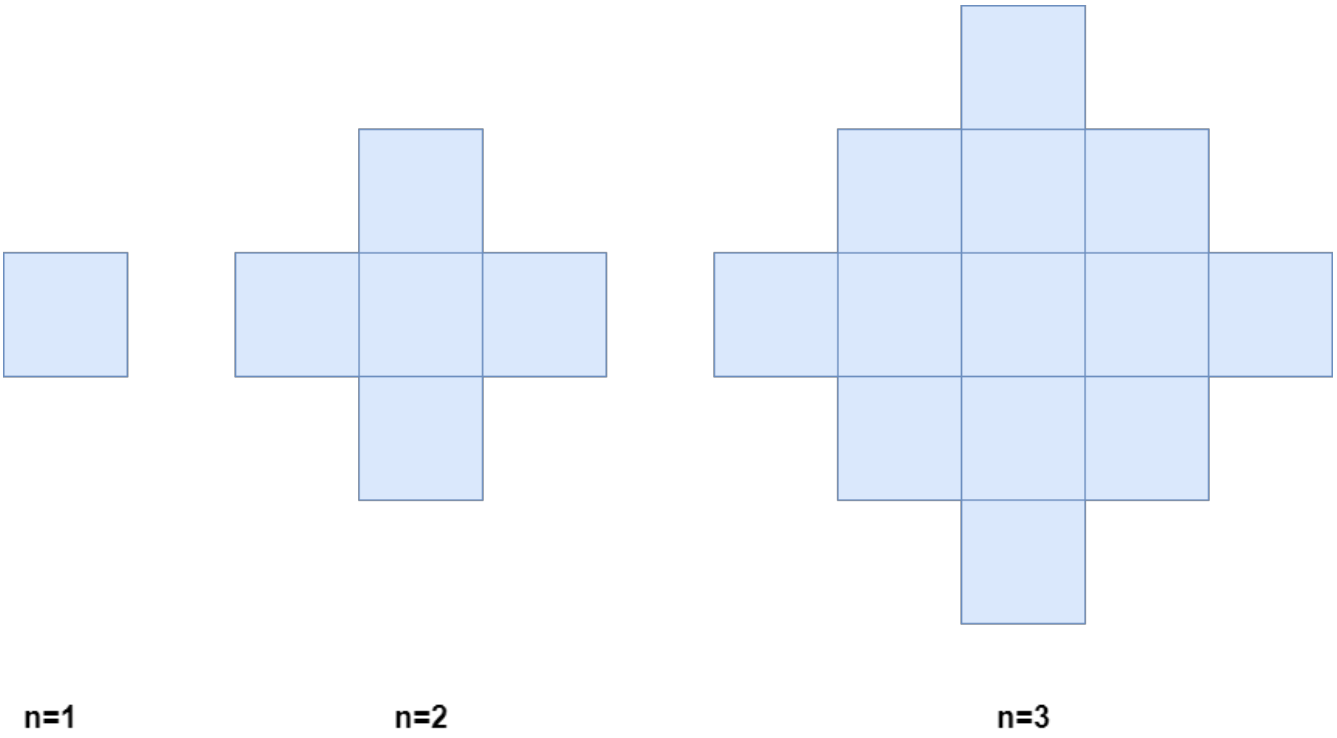
2579. Count Total Number of Colored Cells

There exists an infinitely large two-dimensional grid of uncolored unit cells. You are given a positive integer `n`, indicating that you must do the following routine for `n` minutes:

- At the first minute, color **any** arbitrary unit cell blue.
- Every minute thereafter, color blue **every** uncolored cell that touches a blue cell.

Below is a pictorial representation of the state of the grid after minutes 1, 2, and 3.



Return *the number of* ***colored cells*** *at the end of* `n` *minutes*.

Example 1:

```
Input: n = 1
Output: 1
Explanation: After 1 minute, there is only 1 blue cell, so we return 1.
```

Example 2:

```
Input: n = 2
Output: 5
Explanation: After 2 minutes, there are 4 colored cells on the boundary and 1 in
the center, so we return 5.
```

Constraints:

- $1 \leq n \leq 10^5$

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Overview

We are given a positive integer n, representing the number of minutes. At each minute, the following is performed in a grid:

1. **Minute One**: Color a unit cell blue.
2. **Every Minute Thereafter**: Color every uncolored cell that touches a blue cell.

Our task is to determine how many cells are colored after n minutes.

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```
/*
   ***Math***
   Time compelxity: O(1)
   Space compelxity: O(1)
*/
class Solution {
   public:
      long long coloredCells(int n) {
         return 2*n*1ll*n*1ll-2*n*1ll+1ll;
      }
};
```