

# Problem 651: 4 Keys Keyboard

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 55.94%

**Paid Only:** Yes

**Tags:** Math, Dynamic Programming

## Problem Description

Imagine you have a special keyboard with the following keys:

\* A: Print one 'A' on the screen. \* Ctrl-A: Select the whole screen. \* Ctrl-C: Copy selection to buffer. \* Ctrl-V: Print buffer on screen appending it after what has already been printed.

Given an integer n, return \_the maximum number of\_ 'A'\_you can print on the screen with\*\*at most\*\* `n` \_presses on the keys\_.

\*\*Example 1:\*\*

\*\*Input:\*\* n = 3 \*\*Output:\*\* 3 \*\*Explanation:\*\* We can at most get 3 A's on screen by pressing the following key sequence: A, A, A

\*\*Example 2:\*\*

\*\*Input:\*\* n = 7 \*\*Output:\*\* 9 \*\*Explanation:\*\* We can at most get 9 A's on screen by pressing following key sequence: A, A, A, Ctrl A, Ctrl C, Ctrl V, Ctrl V

\*\*Constraints:\*\*

\* `1 <= n <= 50`

## Code Snippets

**C++:**

```
class Solution {  
public:  
    int maxA(int n) {  
  
    }  
};
```

**Java:**

```
class Solution {  
public int maxA(int n) {  
  
}  
}
```

**Python3:**

```
class Solution:  
    def maxA(self, n: int) -> int:
```