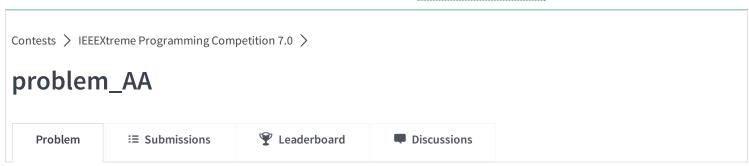


**CHALLENGES** 

SUBMISSIONS LEADERBOARD



The contest is in progress. It ends 2 minutes from now.



In this problem, we give you a solution. Your "only" task is to make it more efficient, so that you would not hit the time limit.

```
def o(s):
    l=len(s)
    return len(set([a+b+c
                     for a in s for b in s for c in s])
               )==l*(l+1)*(l+2)//6
M=int(input())
N=3**M
i=1
s=M*[i]
while i:
    if s[i]-N:
        s[i]=s[i]+1
        if o(s[:i+1]):
            if i<M-1:
                i=i+1
                s[i]=s[i-1]
            else:
                N=s[-1]
    else:
        i=i-1
print(N)
```

So write a program which gives the same output as the following Python program, but runs within the time limit.

## Sample Input 1:

2

## Sample Output 1:

2

## Sample Input 2:

4

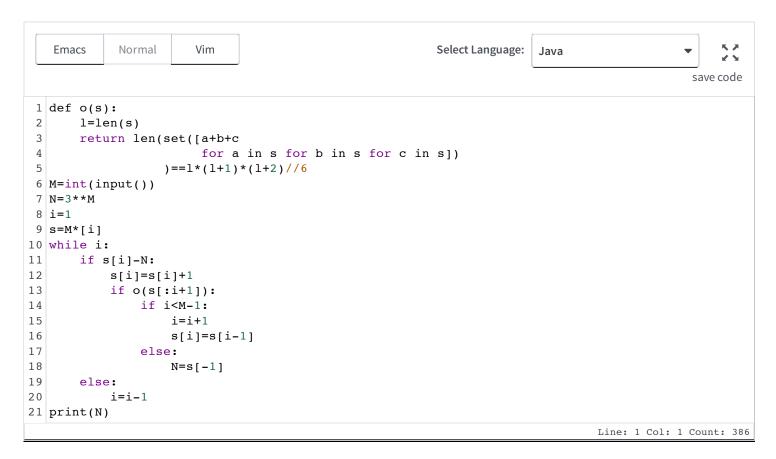
## Sample Output 2:

12

You can assume that the input is a single number n in the range 1 < n < 11

**Problem Author: IEEE** 

Suggest Edits



Use a custom test case

Upload Code as File

Compile & Test

Submit Code

This is a beta version. Join us on IRC at #hackerrank on freenode for hugs or bugs.

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