

The contest is in progress. It ends about 16 hours from now.

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## problem\_AA

Problem

Submissions

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Discussions

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:

**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](#)


Emacs

Normal

Vim

Select Language: 

PHP

save code

```
1 <?php
2 $_fp = fopen("php://stdin", "r");
3 /* Enter your code here. Read input from STDIN. Print output to STDOUT */
4
5 ?>
```

Line: 1 Col: 1 Count: 117

☐ Use a custom test case Upload Code as File[Compile & Test](#)[Submit Code](#)

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