

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

Contests > [IEEEExtreme Programming Competition 7.0](#) >

problem_AA

[Problem](#)
[Submissions](#)

[Leaderboard](#)

[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](#)

EmacsNormalVim

Select Language: C++

save code

```
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

Line: 1 Col: 1 Count: 227

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

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