Problem E: Counting

The Problem

Gustavo knows how to count, but he is now learning how write numbers. As he is a very good student, he already learned 1, 2, 3 and 4. But he didn't realize yet that 4 is different than 1, so he thinks that 4 is another way to write 1. Besides that, he is having fun with a little game he created himself: he make numbers (with those four digits) and sum their values. For instance:

```
132 = 1 + 3 + 2 = 6
112314 = 1 + 1 + 2 + 3 + 1 + 1 = 9 (remember that Gustavo thinks that 4 = 1)
```

After making a lot of numbers in this way, Gustavo now wants to know how much numbers he can create such that their sum is a number n. For instance, for n = 2 he noticed that he can make 5 numbers: 11, 14, 41, 44 and 2 (he knows how to count them up, but he doesn't know how to write five). However, he can't figure it out for n greater than 2. So, he asked you to help him.

The Input

Input will consist on an arbitrary number of sets. Each set will consist on an integer n such that 1 <= n <= 1000. You must read until you reach the end of file.

The Output

For each number read, you must output another number (on a line alone) stating how much numbers Gustavo can make such that the sum of their digits is equal to the given number.

Sample Input

```
2
3
```

Sample Output

```
5
13
```