Harshad Numbers

We're all familiar with harshad numbers. For this problem, you will ... what's that? You *aren't* familiar with harshad numbers? They're also known as Niven numbers – does that ring a bell?? Anything???

Well, it's a simple enough concept. A *harshad* number is a number which is evenly divisible by the sum of its digits. For example, 24 is a harshad number: the sum of its digits is $2 + 4 = 6$ and 24 is divisible by 6. 156 is also a harshad number, since $1 + 5 + 6 = 12$ and $156 = (12)(13)$. 157 is NOT a harshad number since it is not divisible by $1 + 5 + 7 = 13$.

OK, let's start over.

We're all familiar with harshad numbers. For this problem, you will be given a number n and must find the smallest harshad number $\geq n$.

Input

Input consists of a single line containing a positive integer $n \leq 1\,000\,000\,000$.

Output

Display the smallest harshad number greater than or equal to n.

Sample Input 1

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24
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Sample Output 1

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24
```

Sample Input 2

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25
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Sample Output 2

```
27
```

Sample Input 3

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987654321
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Sample Output 3

```
987654330
```