Best Divisor

locked

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Problem Submissions Leaderboard Discussions Editorial

Submissions will no longer be placed on the leaderboard. You may still attempt this problem for practice.

Kristen loves playing with and comparing numbers. She thinks that if she takes two different positive numbers, the one whose digits sum to a larger number is *better* than the other. If the sum of digits is equal for both numbers, then she thinks the smaller number is *better*. For example, Kristen thinks that 13 is better than 31 and that 12 is better than 11.

Given an integer, n, can you find the divisor of n that Kristin will consider to be the best?

Input Format

A single integer denoting n.

Constraints

- $0 < n \leq 10^5$

Output Format

Print an integer denoting the best divisor of n.

Sample Input 0

```
12
```

Sample Output 0

```
6
```

Explanation 0

The set of divisors of 12 can be expressed as $\{1, 2, 3, 4, 6, 12\}$. The divisor whose digits sum to the largest number is 6 (which, having only one digit, sums to itself). Thus, we print 6 as our answer.

Current Buffer (saved locally, editable) Python 3

```python
#!/bin/python3

import sys


n = int(input().strip())

for i in range(

import math

def divisorGenerator(n):
    large_divisors = []
    for i in xrange(1, int(math.sqrt(n) + 1)):
        if n % i == 0:
            yield i
            if i*i != n:
                large_divisors.append(n / i)
    for divisor in reversed(large_divisors):
        yield divisor

```

```
22 k= list(divisorGenerator(100))
```

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