

Consider the following method of enumerating all rational numbers between 0 and 1 (inclusively).

```
for d = 1 to infinity do
  for n = 0 to d do
    if gcd(n,d) = 1 then print n/d
```

where $\text{gcd}(n, d)$ is the greatest common divisor of n and d .

For example, the start of the sequence looks like:

0/1, 1/1, 1/2, 1/3, 2/3, 1/4, 3/4, 1/5, 2/5, 3/5, 4/5, 1/6, 5/6, 1/7, ...



Input

The input consists of a series of test cases. Each test case consists of a single integer $1 \leq k \leq 12, 158, 598, 919$. Input is terminated by '0'; this case should not be processed.

Output

For each test case, output the k -th fraction that would be printed by the program above in the format n/d .

Sample Input

```
1
2
3
12158598919
0
```

Sample Output

```
0/1
1/1
1/2
199999/200000
```