Problem A
Rational Irrationals
Input: rational.txt

Rational numbers are numbers represented by ratios of two integers. For a prime number p, one of the elementary theorems in the number theory is that there is no rational number equal to $\sqrt{p}$. Such numbers are called irrational numbers. It is also known that there are rational numbers arbitrarily close to $\sqrt{p}$.

Now, given a positive integer n, we define a set Q_n of all rational numbers whose elements are represented by ratios of two positive integers both of which are less than or equal to n. For example, Q_4 is a set of 11 rational numbers $\{1/1, 1/2, 1/3, 1/4, 2/1, 2/3, 3/1, 3/2, 3/4, 4/1, 4/3\}$. 2/2, 2/4, 3/3, 4/2 and 4/4 are not included here because they are equal to 1/1, 1/2, 1/1, 2/1 and 1/1, respectively.

Your job is to write a program that reads two integers p and n and reports two rational numbers x/y and u/v, where $u/v < \sqrt{p} < x/y$ and there are no other elements of Q_n between u/v and x/y. When n is greater than $\sqrt{p}$, such a pair of rational numbers always exists.

Input

The input consists of lines each of which contains two positive integers, a prime number p and an integer n in the following format.

p n

They are separated by a space character. You can assume that p and n are less than 10000, and that n is greater than $\sqrt{p}$. The end of the input is indicated by a line consisting of two zeros.

Output

For each input line, your program should output a line consisting of the two rational numbers x/y and u/v ($x/y > u/v$) separated by a space character in the following format.

x/y u/v

They should be irreducible. For example, 6/14 and 15/3 are not accepted. They should be reduced to 3/7 and 5/1, respectively.

Sample Input

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2 5
3 10
5 100
0 0
```

Output for the Sample Input

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3/2 4/3
7/4 5/3
85/38 38/17
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