
Problem A. Forbechenko v Rodvsky

Input file: `standard input`
Output file: `standard output`
Time limit: 1 second
Memory limit: 256 megabytes

Two friends from Yuri Gagárin Elementary School, bored with the trivial content of their math lectures, decided to play a game while their third grade class were being taught ordinary differential equations. Vladimir Rodvsky proposed Oleg Forbechenko the following challenge:

Given integers A and B , Forbechenko should write a numerical representation of $\frac{A}{B}$. Forbechenko accepted this promptly, however he later realized Rodvsky's mischief: for some values of A and B it is impossible to represent the fraction in base 10 with a finite number of digits.

For instance, if $A = 1$ and $B = 3$, in base 10 the fraction $\frac{1}{3}$ is represented as

0.333333...

Forbechenko would have to write down infinitely many 3's to complete Rodvsky's challenge!

On second thoughts, Forbechenko remember that the same fraction can be written in base 3 as 0.1. He decided to code a program to find the smallest base $\beta \geq 2$ such that the fraction $\frac{A}{B}$ has a finite representation.

Input

A single input line has two integers A and B , with $1 \leq A, B \leq 10^{18}$ separated by a single space.

Output

Print the single integer β , the smallest base in which it is possible to write down the fraction $\frac{A}{B}$.

Examples

standard input	standard output
1 3	3
3 4	2