A. k-th divisor

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given two integers n and k. Find k-th smallest divisor of n, or report that it doesn't exist.

Divisor of n is any such natural number, that n can be divided by it without remainder.

Input

The first line contains two integers n and k ($1 \le n \le 10^{15}$, $1 \le k \le 10^{9}$).

Output

If n has less than k divisors, output `-1`.

Otherwise, output the k-th smallest divisor of n.

Examples

input
4 2
output
2

input
5 3
output
-1

input
12 5
output
6

Note

In the first example, number 4 has three divisors: 1, 2 and 4. The second one is 2.

In the second example, number 5 has only two divisors: 1 and 5. The third divisor doesn't exist, so the answer is `-1`.