

Problem E. K-th Divisor

Input file: divisor.in
Output file: divisor.out
Time limit: 5 seconds
Memory limit: 256 megabytes

Find K -th smallest divisor of number N .

Input

The first line contains number of test cases M ($1 \leq M \leq 30\,000$). Each of the next M lines contains one test case: two integers N and K ($1 \leq N \leq 1\,000\,000\,000, 1 \leq K \leq \text{amount of divisors of number } N$).

Output

For each test case print one number — K -th divisor of number N on a single line.

Example

divisor.in	divisor.out
4	1
10 1	2
10 2	5
10 3	10
10 4	