**Happy 2006**

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| --- | --- | --- |
| **Time Limit:** 3000MS |  | **Memory Limit:** 65536K |
|  |  |  |

**Description**

Two positive integers are said to be relatively prime to each other if the Great Common Divisor (GCD) is 1. For instance, 1, 3, 5, 7, 9...are all relatively prime to 2006.   
  
Now your job is easy: for the given integer m, find the K-th element which is relatively prime to m when these elements are sorted in ascending order.

**Input**

The input contains multiple test cases. For each test case, it contains two integers m (1 <= m <= 1000000), K (1 <= K <= 100000000).

**Output**

Output the K-th element in a single line.

**Sample Input**

2006 1

2006 2

2006 3

**Sample Output**

1

3

5

**Source**

[POJ Monthly--2006.03.26](http://poj.org/searchproblem?field=source&key=POJ+Monthly--2006.03.26),static