COCI '08 Contest 2 #2 Reseto

Time limit: 1.0s **Memory limit:** 32M

The sieve of Eratosthenes is a famous algorithm to find all prime numbers up to N. The algorithm is:

1. Write down all integers between 2 and N, inclusive.
2. Find the smallest number not already crossed out and call it P; P is prime.
3. Cross out P and all its multiples that aren't already crossed out.
4. If not all numbers have been crossed out, go to step 2.

Write a program that, given N and K, find the K^{th} integer to be crossed out.

Input Specification

The integers N and K $(2 \leq K < N \leq 1000)$.

Output Specification

Output the K^{th} number to be crossed out.

Sample Input 1

```
7 3
```

Sample Output 1

```
6
```

Sample Input 2

```
15 12
```

Sample Output 2

```
7
```

Sample Input 3

```
10 7
```

Sample Output 3

```
9
```

In the third example, we cross out, in order, the numbers $2, 4, 6, 8, 10, 3, 9, 5$ and 7. The seventh number is 9.