

Problem A

Bom and Prime numbers

Time limit: 1 second
Memory: 1024 megabytes

Problem Description

Yesterday, Bom learned about prime numbers, a very important concept in mathematics. From the theory he learned, a prime number is a natural number greater than **1** that has exactly two divisors: **1** and itself. After understanding this concept, Bom got really excited and began experimenting with problems related to prime numbers.

While solving these problems, Bom encountered a challenge. He wants to know how many prime numbers exist in a given interval from **a** to **b**, i.e., counting the number of prime numbers within this range. However, to make the challenge more interesting, Bom came up with a more advanced problem:

Bom wants to find the smallest length of **any sub-interval** within the range from **a** to **b**, such that the sub-interval contains at least **k** prime numbers. A sub-interval of length **l** is defined by starting from a number in the interval **a** to **b** and includes consecutive numbers within this interval. Bom needs to determine the smallest length **l** such that the sub-interval contains at least **k** prime numbers.

You need to help Bom find the smallest length **l** such that there exists **any sub-interval** of length **l** within the range **a** to **b** that contains at least **k** prime numbers. If no such sub-interval exists, you need to return a special value to indicate this.

Input:

- A single line containing three positive integers **a**, **b**, and **k**. ($1 \leq a, b, k \leq 10^6$)

Output:

- The output should be a single integer **l**, representing the smallest length of the sub-interval that contains at least **k** prime numbers. If no such sub-interval exists, print **-1**.

Example:

INPUT	OUTPUT
1 5 2	3