DMOPC '15 Contest 1 P4 - Itami and Candy

Time limit: 0.6s **Memory limit:** 64M

Itami has bought N pieces of candy, and would like to share them with his friends.

However, they are very picky about the amount of candies that they eat. Lelei only wants a **prime number** of candies, Rory wants candies in multiples of X, her favorite number, and Tuka, trying to keep a slim and trim figure, will take **at most** 1 candy.

In how many different ways can Itami distribute his bag of candies? A distribution is considered different if at least one of his friends gets a different amount of candy. Note that Itami does not have to distribute all N candies; he can choose to eat any remainders by himself.

Note

A **prime number** is a positive integer greater than 1 that has no other factors other than 1 and itself.
A **multiple** of a number X is any number Y such that $\frac{Y}{X}$ is an integer.

Input Specification

The first line of input will contain two space-separated integers N $(1 \leq N \leq 148\,734)$, the number of candies Itami has, and X $(1 \leq X \leq N)$, Rory's favorite number.

Output Specification

A single integer, the number of ways Itami can hand out his candies.

Sample Input 1

```
3 1
```

Sample Output 1

```
4
```

Explanation for Sample Output 1

The ways of distributing are, in order of $\{\text{Lelei, Rory, Tuka}\}$: $\{2, 0, 0\}$, $\{2, 0, 1\}$, $\{2, 1, 0\}$, $\{3, 0, 0\}$.

Sample Input 2

```
1 1
```

Sample Output 2

```
0
```

Explanation for Sample Output 2

Lelei must take at least 2 candies, but Itami doesn't have that many to give. Thus, there is no way to distribute candies.

Sample Input 3

```
10 3
```

Sample Output 3

```
19
```