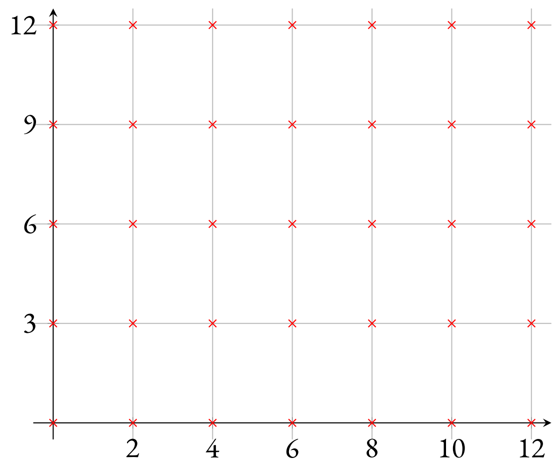
Problem Lattice

Input file	`stdin`
Output file	`stdout`

For every two positive integers N, M, we define $\text{lattice}(N, M)$ to be those points (x, y) for which N divides x and M divides y, and where x, y are non-negative integers. In other words, the points of $\text{lattice}(N, M)$ can be thought of as those points reachable from $(0, 0)$ by moving a multiple of N steps to the right, and a multiple of M steps up. For example, $\text{lattice}(2, 3)$ looks like this.



Given K and a list of P points $(x_1, y_1), \dots, (x_P, y_P)$ with integer coordinates in the plane, answer the following question: For how many positive integers x does $\text{lattice}(x, x)$ contain *at least* K of the P points?

Input data

The first line of the input contains P and K. The next P lines contain the points (x_i, y_i).

Output data

The first line of the output should contain the answer to the question.

Restrictions

- $1 \le x_i, y_i \le 1\,000\,000$
- $1 \le K \le P \le 200\,000$

#	Points	Restrictions
1	16	All the values from input are at most 1 000
2	11	All the values from input are at most 100 000
3	15	$x_i = y_i$ for all the points
4	21	The sequence $x_1, \dots, x_P, y_1, \dots, y_P$ contains pairwise distinct elements.
5	37	No further restrictions.

Examples

Input file	Output file

`3 2`
`1 3`
`3 6`
`4 2`
	`1`

`5 2`
`2 2`
`5 10`
`6 4`
`15 5`
`1 7`
	`3`

Explanations

First example. In the first example, only lattice$(1, 1)$ contains at least 2 points.

Second example. Here, lattice$(1, 1)$ contains all the points, lattice$(2, 2)$ has the first and the third point and lattice$(5, 5)$ has the second and the fourth point. Below is a grid showing all the lattices. lattice$(1, 1)$ is the underlying grid, lattice$(2, 2)$ is marked by red x's, and lattice$(5, 5)$ is marked by blue x's. The points in all three lattices are marked by purple x's. The P points in the input are marked by filled-in circles (•), with the colour showing which grid they belong to: if a point is only in lattice$(1, 1)$ it is gray, if it is in lattice$(1, 1)$ and lattice$(2, 2)$ it is red, and if it is in lattice$(1, 1)$ and lattice$(5, 5)$ it is blue.