TLE '17 Contest 8 P3 - Curious Numbers

Time limit: 1.0s **Memory limit:** 256M

Fax McClad, Croneria's most curious bounty hunter, is interested in certain numbers.

A number is called a **palindrome** if it is the same when read left-to-right or right-to-left. For example, $12\,321$ is a palindrome, and $1\,234$ is not. Leading zeroes are not part of a palindrome. For example, $3\,130$ is not a palindrome.

Fax also loves the number K and any multiple of it.

Fax is interested in the palindromes that are divisible by K between M and N, inclusive. He will do this Q times. Can you tell him how many of these numbers there are?

Fax McClad is a deep thinker.

Input Specification

The first line of input will contain Q $(1 \leq Q \leq 10^5)$ and K $(1 \leq K \leq 10^{10})$.

The Q lines of input follow. Each line will contain M and N $(1 \leq M \leq N \leq 10^{10})$.

For 20% of the points, $N, M, K, Q \leq 10^3$.

For an additional 30% of the points, $N, M, K \leq 10^6$, $Q \leq 10^3$.

Output Specification

On separate lines, print the answer to each query.

Sample Input

```
2 2
10 50
100 300
```

Sample Output

```
2
10
```

Explanation for Sample Output

For the first query, $11, 22, 33, 44$ are the only palindromes in between 10 and 50. Only 22 and 44 are divisible by 2.