Count the numbers!

For given integers **a** and **b** your task is to find how many integers in the range **[a,b]** are divisible by a number **x**, and have the additional property that the sum of their digits lies in the range **[l,r]** for given **l,r**.

Input

In the first line you're given **a** and **b** ($1 <= a <= b < 10^{100}$).
In the second line you're given three positive integers **x** ($1 <= x <= 10$), **l**, **r** ($1 <= l <= r <= 1{,}000$).

Output

In the first and only line output the result modulo **1,000,000,007**.

Example

Input:
1 100
5 10 50

Output:
5

Scoring

By solving this problem you score 10 points.