CF 628D - Magic Numbers

2 seconds

Consider the decimal presentation of an integer. Let's call a number `d-magic` if digit d appears in decimal presentation of the number on even positions and nowhere else.

For example, the numbers 1727374, 17, 1 are `7-magic` but 77, 7, 123, 34, 71 are not `7-magic`. On the other hand the number 7 is `0-magic`, 123 is `2-magic`, 34 is `4-magic` and 71 is `1-magic`.

Find the number of `d-magic` numbers in the segment $[a, b]$ that are multiple of m. Because the answer can be very huge you should only find its value modulo $10^9 + 7$ (so you should find the remainder after dividing by $10^9 + 7$).

Input

The first line contains two integers m, d ($1 \le m \le 2000$, $0 \le d \le 9$) — the parameters from the problem statement.

The second line contains positive integer a in decimal presentation (without leading zeroes).

The third line contains positive integer b in decimal presentation (without leading zeroes).

It is guaranteed that $a \le b$, the number of digits in a and b are the same and don't exceed 2000.

Output

Print the only integer a — the remainder after dividing by $10^9 + 7$ of the number of `d-magic` numbers in segment $[a, b]$ that are multiple of m.

Examples

input

```
19 7
1000
9999
```

output

```
6
```

Input

```
2 6
10
99
```

output

```
8
```

input

```
2 0
1
9
```

output

```
4
```

Note

The numbers from the answer of the first example are 16, 26, 36, 46, 56, 76, 86 and 96.

The numbers from the answer of the second example are 2, 4, 6 and 8.

The numbers from the answer of the third example are 1767, 2717, 5757, 6707, 8797 and 9747.