Educational DP Contest AtCoder S - Digit Sum

Time limit: 0.6s **Memory limit:** 1G

Find the number of integers between 1 and K (inclusive) satisfying the following condition, modulo $10^9 + 7$:

- The sum of the digits in base ten is a multiple of D.

Constraints

- All values in input are integers.
- $1 \leq K < 10^{10\,000}$
- $1 \leq D \leq 100$

Input Specification

The first line will contain the integer K.

The second line will contain the integer D.

Output Specification

Print the number of integers satisfying the condition, modulo $10^9 + 7$.

Sample Input 1

```
30
4
```

Sample Output 1

```
6
```

Explanation For Sample 1

Those six integers are: 4, 8, 13, 17, 22, and 26.

Sample Input 2

```
1000000009
1
```

Sample Output 2

```
2
```

Explanation For Sample 2

Be sure to print the number modulo $10^9 + 7$.

Sample Input 3

```
98765432109876543210
58
```

Sample Output 3

```
635270834
```