

Task 1. FRACTION

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Let a and b be positive integers. We present a/b as a decimal fraction. It may be finite (e.g. $1/4 = 0.25$) or infinite (e.g. $1/3 = 0.3333\dots$). We consider each finite decimal fraction to be infinite, because we may write zeroes after the last digit (e.g. $1/4 = 0.25000\dots$).

Write a program **frac**, which given positive integers a , b , k , and p , finds p consecutive digits in the decimal presentation of a/b , which are placed on positions starting with the k -th digit after the decimal point.

Input

The only line on standard input contains the values of a , b , k and p , separated by spaces.

Output

On the only line of the standard output your program has to output the sequence of found digits without spaces (including all zeroes, if there are any).

Constraints

- $0 < a < b < 30\,000\,000$
- $0 < k < 10^{18}$
- $0 < p < 40$

Example

Input	Output
1 4 2 5	50000
1 7 3 10	2857142857