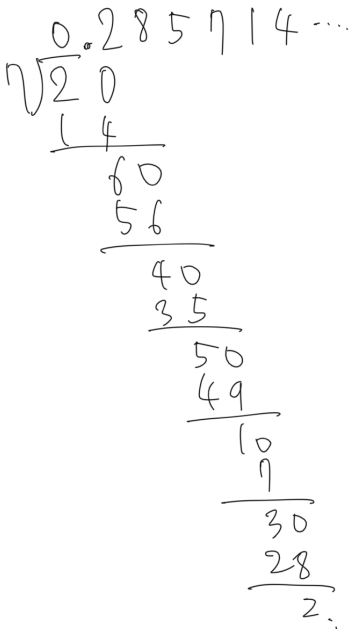
Division



There was a task with multiplication, so there must be a task about division!

Humans divide 2 by 7 like the picture on the left.

As you can see, this method has a *recursive* structure, that we've learned this Monday.

What makes this recursive? As 2 is smaller than 7, we multiply 2 by 10 and make 20, and then divide it by 7 and get the quotient 2 and remainder 6. This process can be also written like this:

$$\frac{2}{7} = \frac{1}{10} \times \left(2 + \frac{6}{7}\right)$$

So we can find **all digits of** $\frac{2}{7}$ by calculating **all digits of** $\frac{6}{7}$, which is a self-repeating problem.

Given three positive integers p, q $(p < q)$ and d, write a program that finds the value of $\frac{p}{q}$ until d digits after the decimal point.

Input

Your input consists of an arbitrary number of lines, but no more than 1,000.

For each input line, three positive integers p, q $(1 \le p < q \le 1{,}000{,}000)$ and d $(1 \le d \le 100)$

The end of input is indicated by a line containing only the value -1.

Output

For each input line, print exactly $d + 2$ characters of the form "$0.x_1x_2 \cdots x_d$" (refer to the samples) Do not round the value, just truncate except the d digits

Example

Standard input	Standard output
2 7 6 2 7 3 2 5 10 -1	0.285714 0.285 0.4000000000

Time Limit

1 second.