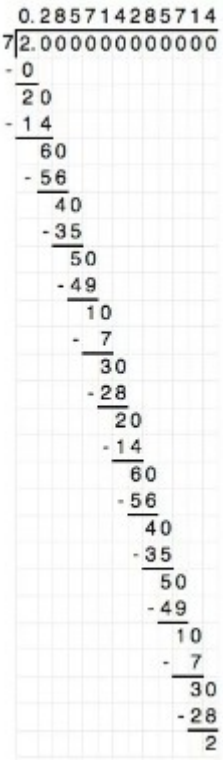
Problem D. Division

Time Limit 1 second

Problem



There was a task with multiplication, so there must be a task about division! here 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. 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 2/7** by calculating **all digits of 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 p/q of 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 "$0.x_1\ x_2 \cdots x_d$ " (refer to the samples) Do not round the value, just truncate except the d digits

Sample Input 1	Sample Output 1
2 7 6 2 7 3 2 5 10 -1	0.285714 0.285 0.4000000000