

C. Lucky Tickets

time limit per test: 1.5 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

In Walrusland public transport tickets are characterized by two integers: by the number of the series and by the number of the ticket in the series. Let the series number be represented by a and the ticket number — by b , then a ticket is described by the ordered pair of numbers (a, b) .

The walruses believe that a ticket is lucky if $a * b = rev(a) * rev(b)$. The function $rev(x)$ reverses a number written in the decimal system, at that the leading zeroes disappear. For example, $rev(12343) = 34321$, $rev(1200) = 21$.

The Public Transport Management Committee wants to release x series, each containing y tickets, so that **at least** w lucky tickets were released and the total number of released tickets ($x * y$) were minimum. The series are numbered from 1 to x inclusive. The tickets in each series are numbered from 1 to y inclusive. The Transport Committee cannot release more than max_x series and more than max_y tickets in one series.

Input

The first line contains three integers max_x , max_y , w ($1 \leq max_x, max_y \leq 10^5$, $1 \leq w \leq 10^7$).

Output

Print on a single line two space-separated numbers, the x and the y . If there are several possible variants, print any of them. If such x and y do not exist, print a single number - 1.

Examples

input
2 2 1
output
1 1

input
132 10 35
output
7 5

input
5 18 1000
output
-1

input
48 132 235
output
22 111