north america
contests

## The 2023 ICPC North America Qualifier

# Problem H Magnesium Supplementation 

## Time limit: 1 second

At a recent doctor's appointment, Brandon has been marked as being deficient in magnesium. His doctor has advised him to take exactly some number of picograms of magnesium a day. His doctor can prescribe pills that have any integer number of picograms of magnesium from one up to a maximum. Brandon doesn't like taking pills though, so he refuses any prescription that requires him to take too many pills in a day.

Your task is to find all prescriptions that Brandon could be given. Note that all pills prescribed to Brandon must have the same dosage.

## Input

The single line of input contains three integers $n, k$ and $p\left(1 \leq n, k, p \leq 10^{11}\right)$, where $n$ is the number of picograms per day that Brandon must take, $k$ is the maximum amount in picograms of magnesium in any of the pills, and $p$ is the maximum number of pills per day that Brandon is willing to take.

## Output

On the first line, output a single integer, which is the number of prescriptions that Brandon could be given.

On each subsequent line, output a single integer, which is the number of picograms per pill in the prescription. Output the prescriptions in increasing order.

## Sample Input 1 <br> Sample Output 1

| 664 | 3 |
| :--- | :--- |
|  | 2 |
|  | 3 |
|  | 6 |

Sample Input 2
Sample Output 2

| 623 | 1 |
| :--- | :--- |

