Introduction

Your family have a big vineyard and are producing their annual wine. They have a certain amount of sizes of jars and would like to distribute using the biggest jars possible. They need your help to write a program to distribute the wine into the jars.

Input

The first line of the input of the program will be the set of available sizes of the jars in ascending order. There will always be a maximum of 5 sizes and each size will always be smaller than 25. To make sure wine can always be distributed, even if it does not exist, you must assume that size 1 exists.

The rest of the lines will be the amounts of wine to be distributed, always smaller than 256. The input will end with a zero.

Output

The program must distribute the amount of litres produced in the provided jars, using the biggest jars you can, even if it means not using the minimum amount of total jars.

```
36 litres require 2 jar(s) of 15, 6 jar(s) of 1
53 litres require 3 jar(s) of 15, 1 jar(s) of 7, 1 jar(s) of 1
10 litres require 1 jar(s) of 7, 3 jar(s) of 1
```