Write a program that, given \( n \) different words \( s_1, \ldots, s_n \) and a number \( p \), prints all the ways to share the words between \( p \) subsets.

**Input**

Input consists of a natural number \( n > 0 \), followed by \( s_1, \ldots, s_n \), followed by a natural number \( p > 0 \).

**Output**

Print all the ways to share the words between \( p \) subsets. The elements of each set must appear in the same order than in the input. Print an empty line after each partition.

**Observation**

Strictly speaking, a partition cannot have empty subsets, but we forget about that restriction in this exercise.

**Information about the checker**

You can print the solutions to this exercise in any order.

**Sample input**

```
2
hello bye
2
```

**Sample output**

```
subset 1: {hello, bye}
subset 2: {}
subset 1: {hello}
subset 2: {bye}
subset 1: {bye}
subset 2: {hello}
subset 1: {}
subset 2: {hello, bye}
```