# Chemical equations
## Problem ID: a15p04chemicalequations

When balancing a chemical equation, a necessary requirement is that all the elements appearing on one side of the equation must also appear on the other side of the equation.

Write a program that, given a chemical equation, checks if the same elements appear on both sides of the equation.

**Hint**: You should be able to reuse functions from the previous exercise, but here each side of the equation can include more than one formula, so you might need to split the equation into individual formulae to use those functions.

## Input

The input consists of one line, containing one chemical equation whose sides are separated by "<=>".

Each side can contain multiple formulae, separated by a "+". A formula is defined as a series of chemical components each possibly followed by a number. Chemical components always start off with 1 or 2 English letters, the first being uppercase, and the second being lowercase.

In the tests, each chemical equation, contains 2 to 100 formulae and each formula $f$ will be restricted to $1 \leq |f| \leq 10$.

## Output

The output should consist of one or more of the following strings, in this order:

- "No elements missing from either side of the equation."

  if there are no elements missing from either side.

- "The following elements appear on the left side but not the right:"

  followed by all the elments missing from the right side, if there are elements that only appear on the left side.

- "The following elements appear on the right side but not the left:"

  followed by all the elments missing from the left side, if there are elements that only appear on the right side.

If there are elements missing from either side the program should also output the string:

"Therefore, balancing this chemical equation is not possible."

### Sample Input 1

```
PbN6 + CrMn2O8 <=> Cr2O3 + MnO2 + Pb3O4 + N2
```

### Sample Output 1

```
No elements missing from either side of the equation.
```

### Sample Input 2

```
KClO3 + PbN6 + CrMn2O8 <=> Cr2O3 + MnO2 + Pb3O4 + N2 + C6H12O6
```

### Sample Output 2

```
The following elements appear on the left side but not the right:
 Cl, K
The following elements appear on the right side but not the left:
 C, H
Therefore, balancing this chemical equation is not possible.
```