4237   Extended Normal Order Sort

When sorted in standard order, strings with digits in them may not sort to where they are expected. For instance, **xyz100** precedes **xyz2**. In some applications such as listing files, *normal order sort* may be used where any string of digits in a character string is treated as a single digit with numerical value given by the digit string. For example, the following are in normal order:

$$XYZ001, XYZ2, XYZ003, XYZ08, XYZ23, XYZ100, XYZQ$$

We wish to extend normal order sort in two ways:

1. Lower case and upper case letters sort the same (with the upper case value).

2. If a plus (+) or minus (-) sign precedes a digit and does not follow a digit, it is considered part of the following number for sorting purposes.

So **123+456+7890** are three numbers separated by plus signs but **A+003** is the same as **A3**.

To do our sort, we will use a library sort routine but we need to furnish a comparison routine. Write a comparison routine which takes as input two strings of printable, non-space *ASCII* characters **(chr(33)-chr(126))** and returns:

'**-1**' if the first string should precede the second in extended normal order
'**0**' it the two strings are the same in extended normal order, or
'**1**' if the first string should follow the second in extended normal order.

Input

The first line of input contains a single integer N, $(1 \le N \le 1000)$ which is the number of data sets that follow. Each data set consists of a single line of input containing the two strings to be compared separated by a space.

Output

For each data set, you should generate one line of output with the following values: The data set number as a decimal integer (start counting at one), a space and '**-1**', '**0**' or '**1**' depending on whether the first string precedes, is the same as, or follows the second string in extended normal order.

Sample Input

```
5
x-3 X0001
123-456-7890 123+456+7890
xYz000123J XyZ+123j
#$%^&*[]- abcdefgh
Abc47jKL+00123 ABC+47jkL123
```

Sample Output

```
1 -1
2 1
3 0
4 -1
5 0
```