NEWLINES

In a computer system, all kinds of data are represented as numeric codes in various formats. A text file is also stored as a sequence of numeric codes. A text file stores newline characters, but different operating systems represent them with different special characters:

- **Windows:** uses two characters — Carriage Return (CR, code 13) followed immediately by Line Feed (LF, code 10). These two must appear together to count as a single newline.
- **Unix:** uses Line Feed (LF, code 10).
- **Mac (classic):** uses Carriage Return (CR, code 13).

Thus, the same sequence of numeric codes may be interpreted as having different line breaks depending on the operating system. For example, consider the sequence:

84 10 79 13 73 13 10 46

- On Windows, it is interpreted as having a newline after character code 73.
- On Unix, it is interpreted as having newlines after character codes 84 and 13.

Given a sequence of numeric codes representing the contents of a text file, determine how many lines (including empty lines) would be read under each operating system.

Input

The first line contains an integer N ($2 \leqslant N \leqslant 10\,000$), the length of the sequence. Each of the next N lines contains a positive integer A_i ($0 \leqslant A_i \leqslant 255$), representing the character code of the i-th character in the sequence.

Output

Output the number of lines when the data is interpreted under Windows, Unix, and Mac (classic), respectively, separated by a space.

Example

Input	Output
8 84 10 79 13 73 13 10 46	2 3 3
2 10 13	1 2 2