Even, Odd, Positive and Negative

Input file:	standard input
Output file:	standard output
Time limit:	1 second
Memory limit:	256 megabytes

Given N numbers. **Count** how many of these values are **even, odd, positive** and **negative**.

Input

First line contains one number N ($1 \leq N \leq 10^3$) number of values.

Second line contains N numbers ($-10^5 \leq X_i \leq 10^5$).

Output

Print four lines with the following format:

First Line: "Even: X", where X is the number of **even** numbers in the given input.

Second Line: "Odd: X", where X is the number of **odd** numbers in the given input.

Third Line: "Positive: X", where X is the number of **positive** numbers in the given input.

Fourth Line: "Negative: X", where X is the number of **negative** numbers in the given input.

Example

standard input	standard output
5 -5 0 -3 -4 12	Even: 3 Odd: 2 Positive: 1 Negative: 3

Note

First Example :

Even Numbers are : **0, -4 , 12**

Odd Numbers are : **-5 , -3**

Positive Numbers are : **12**

Negative Numbers are : **-5 , -3 , -4**