
Replacement

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

Given a number N and an array A of N numbers. Print the array after doing the following operations:

- Replace every **positive** number by 1.
- Replace every **negative** number by 2.

Input

First line contains a number N ($2 \leq N \leq 1000$) number of elements.

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

Output

Print the array after the **replacement** and it's values separated by space.

Example

standard input	standard output
5 1 -2 0 3 4	1 2 0 1 1