COLLECT

A game is played on a straight line, on which there are K items placed. The i-th item is located at coordinate X_i.

You start at coordinate 0, then you must run to collect all the items in order. That is, starting from position 0, you must run to X_1, then to X_2, and so on until X_K.

Calculate the total distance you need to run.

Input

The first line contains an integer K, the number of items you must collect ($1 \leqslant K \leqslant 100$).

The next K lines each provides the coordinate X_i of item i ($-1\,000 \leqslant X_i \leqslant 1\,000$) in order of i. Multiple items may be placed at the same position.

Output

Output the total distance you need to run.

Example

Input	Output
4 1 2 3 4	4
5 10 5 10 5 20	40