Problem A. Augmented Reality Game

Input file:	stdin
Output file:	stdout
Time limit:	1 second
Memory limit:	256 megabytes

Augmented reality game players are acting on the map of the Earth capturing portals and linking them to each other using portal keys from their inventory. To link portals A and B, a player goes to portal B and uses a key to portal A to create a bidirectional link between them. This key to portal A is used up in the process and disappears from the player's inventory. A player may go to any portal at any time at his discretion. All keys to the same portal are indistinguishable.

When three portals are linked to each other, a triangular field is created. Fields can intersect each other arbitrarily. However, each field requires its own set of links, i. e. no fields can share the same link between portals. If two or more fields need to be created using portals A and B, a separate A–B link needs to be created for each field.

You are to help a player calculate the maximum number of fields he can create using a given set of keys he has.

Input

The first line of input contains an integer N: the number of distinct portals on the map ($1 \le N \le 10\,000$). Each of the next N lines contains one integer K_i: the number of keys a player has to portal i initially ($0 \le K_i \le 10\,000$).

Output

The first line of the output must contain a single integer F: the maximum number of fields that can be created using the given set of keys.

Examples

stdin	stdout
4 1 1 1 2	1
4 1 2 1 3	2