Problem B. Triangle

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	256 mebibytes

There are N sticks. The length of the i-th stick is a_i. You want to choose six sticks and construct two triangles. Each stick should be used as an edge of one of the triangles. Also, the triangles should be non-degenerate.

Compute the maximum possible total length of the six chosen sticks. If two triangles can not be constructed this way, assume the total length is 0.

Input

The first line contains an integer N ($1 \leq N \leq 10^5$). The i-th of the next N lines contains an integer a_i ($1 \leq a_i \leq 10^{15}$).

Output

Print the answer.

Example

standard input	standard output
6 1 1 1 1 1 1	6