Buildings

Input file:	`standard input`
Output file:	`standard output`
Time limit:	0.5 seconds
Memory limit:	64 megabytes

The mayor of Julc-Acopan wishes to be able to see as many buildings as he can from his home. His view of the town may be simplified to points on the plane. He is sitting at the origin at $(0, 0)$ and the buildings are segments from (x_i,0) to (x_i,y_i). It is known that x_i = i, in other words $x_1 = 1$, $x_2 = 2$ and so on (the buildings occupy the integers 1, 2.. n on the OX axis).

The mayor being mayor he may choose to destroy at most one building to accomplish his dream. You are asked to answer the maximum number of buildings he might see.

A building is considered seen if an area larger than 0 is able to be seen, in other words if a single point is within sight it does not count.

Input

The first line contains the integer n, the number of buildings ($1 \leq n \leq 2 * 10^5$).

The following line contains n integers each the y_i ($1 \leq y_i \leq 10^{12}$), where y_i is the value of building i.

For tests worth 20 points it is guaranteed that ($1 \leq n \leq 1000$).

Output

Output a single integer, the maximum number of buildings the mayor can see.

Example

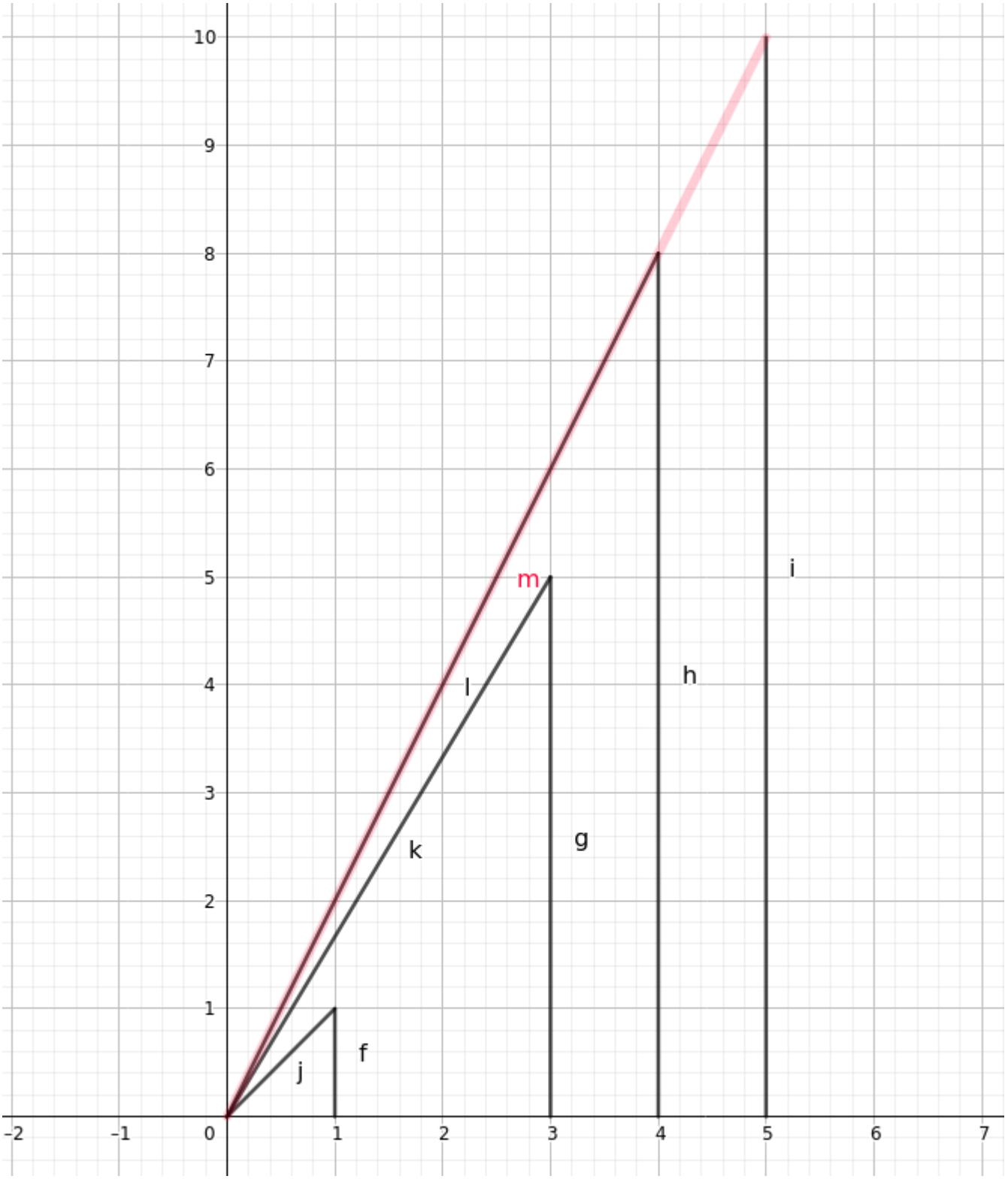
standard input	standard output
5 1 4 5 8 10	3

Note

The mayor can demolish the second building and see the first, third and fourth building.

The fifth building cannot be seen because only one point is within sight.

The following image may be of help


10
9
8
7
6
5
4
3
2
1
0
-2
-1
1
2
3
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m
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i