HASELEMENTSUM

Given an integer n and a list L of distinct integers, find whether or not there exist two distinct integers in the list that sum to n.

Constraints

$$1 < n < 10000$$

$$1 < len(L) < 500$$

Input

An integer n, followed by an integer $len(L)$, followed by $len(L)$ distinct integers representing the list L.

Output

Two integers in increasing order summing to n, or the text `False` if no such integers exist.

Sample input

```
4 3 1 3 4
```

Sample output

```
1 3
```

View submissions (https://cs124.seas.harvard.edu/problem/HASELEMENTSUM/code-submission)

Test cases

Input	Output	Points	Timeout
`4 3 1 3 4`	`1 3`	0	100 ms
Hidden	*Hidden*	20	100 ms
Hidden	*Hidden*	20	100 ms
Hidden	*Hidden*	30	100 ms
Hidden	*Hidden*	30	200 ms

Download (https://cs124.seas.harvard.edu/problem/HASELEMENTSUM/test-cases)

Inspired by the "Ultra Cool Programming Contest Control Centre" by Sonny Chan.
Modified for CS 124 by Neal Wu (https://github.com/nealwu), with design help from Martin Camacho.
Further refined by Nikhil Benesch (https://github.com/benesch).