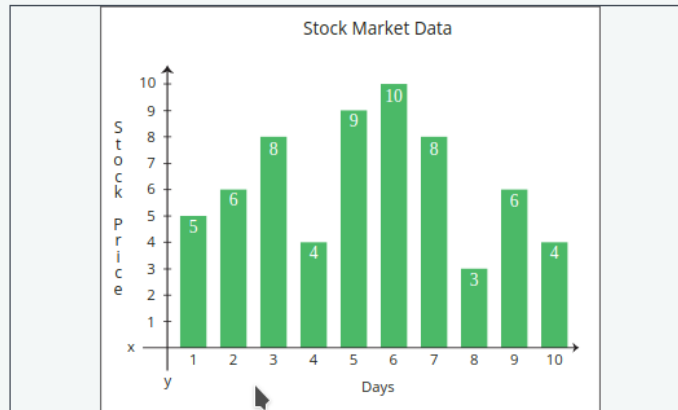


4. Stock market prediction

In this prediction game, the first player gives the second player some stock market data for some consecutive days. The data contains a company's stock price on each day. The rules for the game are:

- Player 1 will tell player 2 a day number
- player 2 has to find the nearest day on which stock price is smaller than the given day
- If there are two results, then player 2 finds the day number which is smaller
- if no such day exists, then the answer is -1 .

For example, the image below shows the stock market data for 10 consecutive days. The horizontal axis represents the day number, starting at 1, and the vertical axis represents the stock price on that day.



Example

$n = 10$

$stockData = [5, 6, 8, 4, 9, 10, 8, 3, 6, 4]$

$queries = [6, 5, 4]$

On day 6, the stock price is 10. Both 9 and 8 are lower prices one day away. Choose 9 (day 5) because it is before day 6.

On day 5, the stock price is 9. 4 is the closest lower price on day 4.

On day 4, the stock price is 4. The only lower price is on day 8.

The return array is $[5, 4, 8]$.

Function Description

Complete the `predictAnswer` function in the editor below.

`predictAnswer` has 2 parameters:

`int stockData[n]`: the value of each `stockData[i]` is the stock price on the $i+1^{th}$ day (where $0 \leq i < n$).

`int queries[q]`: the value of each element `queries[j]`, is the day number given in the query (where $0 \leq j < q$).

Return

`int[q]`: the value at each index i is the answer to `queries[i]`

Constraints

- $1 \leq n \leq 10^5$
- $1 \leq stockData[i] \leq 10^9$
- $1 \leq q \leq 10^5$
- $1 \leq queries[j] \leq 10^9$

▼ Input Format For Custom Testing

Locked stub code in the editor reads the following input from stdin and passes it to the function.

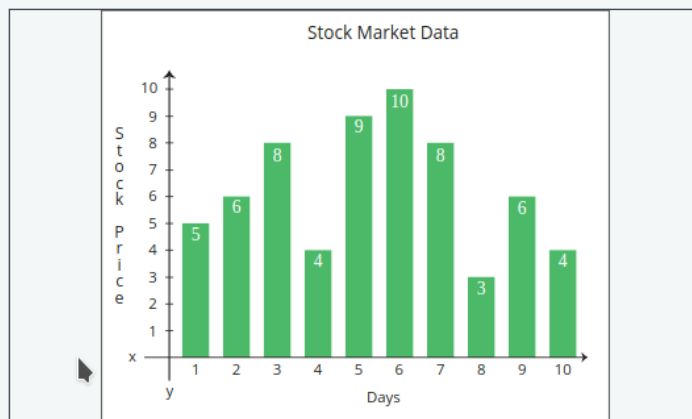
The first line contains an integer, n , denoting the number of elements in `stockData`.

Each line i^{th} of the n subsequent lines contains an integer, `stockData[i]`, the stock price on the $i+1^{th}$ day.

Next line contains an integer, q , the number of elements in `queries`.

Each line j^{th} of the q subsequent lines contains an integer, `queries[j]`, the day number of the j^{th} query.

Explanation 0



- If the day number is 3, both days 2 and 4 are smaller. Choose the earlier day, day 2.
- If the day number is 1, day 4 is the closest day with a smaller price.
- If the day number is 8, there is no day where the price is less than 3. The answer is -1.
- The return array is [2, 4, -1]

```
2
4
-1
```