Climbing the Leaderboard

Alice is playing an arcade game and wants to climb to the top of the leaderboard and wants to track her ranking. The game uses Dense Ranking, so its leaderboard works like this:

- The player with the highest score is ranked number 1 on the leaderboard.
- Players who have equal scores receive the same ranking number, and the next player(s) receive the immediately following ranking number.

For example, the four players on the leaderboard have high scores of 100, 90, 90, and 80. Those players will have ranks 1, 2, 2, and 3, respectively. If Alice's scores are 70, 80 and 105, her rankings after each game are 4^{th}, 3^{rd} and 1^{st}.

Function Description

Complete the climbingLeaderboard function in the editor below. It should return an integer array where each element $res[j]$ represents Alice's rank after the j^{th} game.

climbingLeaderboard has the following parameter(s):

- scores: an array of integers that represent leaderboard scores
- alice: an array of integers that represent Alice's scores

Input Format

The first line contains an integer n, the number of players on the leaderboard.
The next line contains n space-separated integers $scores[i]$, the leaderboard scores in decreasing order.
The next line contains an integer, m, denoting the number games Alice plays.
The last line contains m space-separated integers $alice[j]$, the game scores.

Constraints

- $1 \leq n \leq 2 \times 10^5$
- $1 \leq m \leq 2 \times 10^5$
- $0 \leq scores[i] \leq 10^9$ for $0 \leq i < n$
- $0 \leq alice[j] \leq 10^9$ for $0 \leq j < m$
- The existing leaderboard, $scores$, is in descending order.
- Alice's scores, $alice$, are in ascending order.

Subtask

For 60% of the maximum score:

- $1 \leq n \leq 200$
- $1 \leq m \leq 200$

Output Format

Print m integers. The j^{th} integer should indicate Alice's rank after playing the j^{th} game.

Sample Input 1

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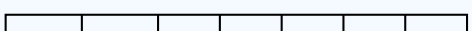

7

100	100	50	40	40	20	10

Array: scores

5	25	50	120

Array: alice

```
100 100 50 40 40 20 10
4
5 25 50 120
```

Sample Output 1

```
6
4
2
1
```

Explanation 1

Alice starts playing with **7** players already on the leaderboard, which looks like this:

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
3	Ritika	40
3	Tom	40
4	Heraldo	20
5	Riley	10

After Alice finishes game **0**, her score is **5** and her ranking is **6**:

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
3	Ritika	40
3	Tom	40
4	Heraldo	20
5	Riley	10
6	**Alice**	**5**

After Alice finishes game **1**, her score is **25** and her ranking is **4**:

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
3	Ritika	40
3	Tom	40
4	**Alice**	**25**
5	Heraldo	20
6	Riley	10

After Alice finishes game 2, her score is 50 and her ranking is tied with Caroline at 2:

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
2	**Alice**	**50**
3	Ritika	40
3	Tom	40
4	Heraldo	20
5	Riley	10

After Alice finishes game 3, her score is 120 and her ranking is 1:

Rank	Name	Score
1	**Alice**	**120**
2	Emma	100
2	David	100
3	Caroline	50
4	Ritika	40
4	Tom	40
5	Heraldo	20
6	Riley	10

Sample Input 2

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100	90	90	80	75	60

Array: scores

```
6
100 90 90 80 75 60
5
50 65 77 90 102
```

50	65	77	90	102

Array: alice

Sample Output 2

```
6
5
4
2
1
```

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```
#!/bin/python3

import math
import os
import random
import re
import sys

# Complete the climbingLeaderboard function below.
def climbingLeaderboard(scores, alice):

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    scores_count = int(input())

    scores = list(map(int, input().rstrip().split()))

    alice_count = int(input())

    alice = list(map(int, input().rstrip().split()))

    result = climbingLeaderboard(scores, alice)

    fptr.write('\n'.join(map(str, result)))
    fptr.write('\n')

    fptr.close()

```

Line: 1 Col: 1

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