

Queue Removals

You're given a list of n integers `arr`, which represent elements in a queue (in order from front to back). You're also given an integer x , and must perform x iterations of the following 3-step process:

- Pop x elements from the front of queue (or, if it contains fewer than x elements, pop all of them)
- Of the elements that were popped, find the one with the largest value (if there are multiple such elements, take the one which had been popped the earliest), and remove it
- For each one of the remaining elements that were popped (in the order they had been popped), decrement its value by 1 if it's positive (otherwise, if its value is 0, then it's left unchanged), and then add it back to the queue

Compute a list of x integers `output`, the i th of which is the *1-based index in the original array* of the element which had been removed in step 2 during the i th iteration.

Signature

```
int[] findPositions(int[] arr, int x)
```

Input

x is in the range $[1, 316]$.

n is in the range $[x, x*x]$.

Each value `arr[i]` is in the range $[1, x]$.

Output

Return a list of x integers `output`, as described above.

Example

```
n = 6
arr = [1, 2, 2, 3, 4, 5]
x = 5
output = [5, 6, 4, 1, 2]
```

The initial queue is `[1, 2, 2, 3, 4, 5]` (from front to back).

In the first iteration, the first 5 elements are popped off the queue, leaving just `[5]`. Of the popped elements, the largest one is the 4, which was at index 5 in the original array. The remaining elements are then decremented and added back onto the queue, whose contents are then `[5, 0, 1, 1, 2]`.

In the second iteration, all 5 elements are popped off the queue. The largest one is the 5, which was at index 6 in the original array. The remaining elements are then decremented (aside from the 0) and added back onto the queue, whose contents are then `[0, 0, 0, 1]`.

In the third iteration, all 4 elements are popped off the queue. The largest one is the 1, which had the initial value of 3 at index 4 in the original array. The remaining elements are added back onto the queue, whose contents are then `[0, 0, 0]`.

In the fourth iteration, all 3 elements are popped off the queue. Since they all have an equal value, we remove the one that was popped first, which had the initial value of 1 at index 1 in the original array. The remaining elements are added back onto the queue, whose contents are then `[0, 0]`.

In the final iteration, both elements are popped off the queue. We remove the one that was popped first, which had the initial value of 2 at index 2 in the original array.