1272. Remove Interval

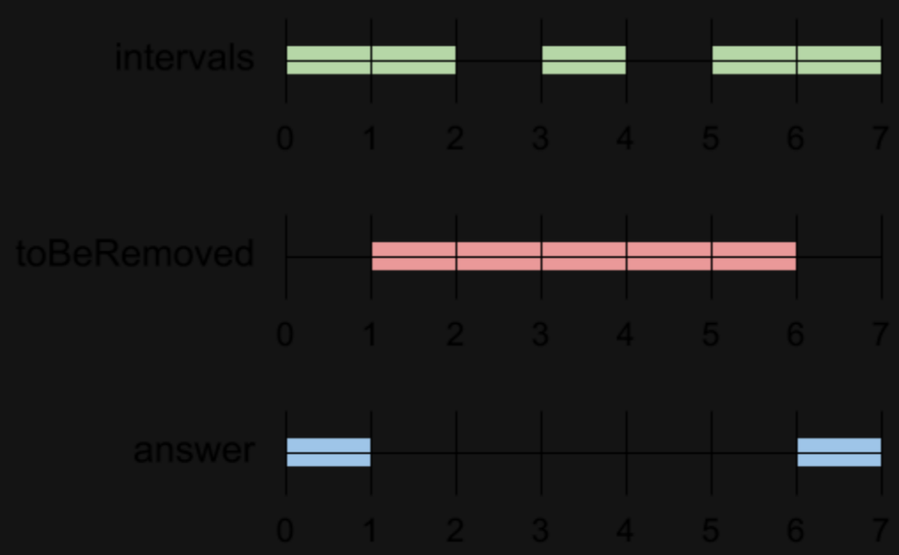
Description

A set of real numbers can be represented as the union of several disjoint intervals, where each interval is in the form `[a, b)`. A real number `x` is in the set if one of its intervals `[a, b)` contains `x` (i.e. `a <= x < b`).

You are given a **sorted** list of disjoint intervals `intervals` representing a set of real numbers as described above, where `intervals[i] = [a_i, b_i]` represents the interval `[a_i, b_i)`. You are also given another interval `toBeRemoved`.

Return *the set of real numbers with the interval* `toBeRemoved` ***removed*** *from* `intervals`. *In other words, return the set of real numbers such that every* `x` *in the set is in* `intervals` *but* ***not*** *in* `toBeRemoved`. *Your answer should be a* ***sorted*** *list of disjoint intervals as described above.*

Example 1:




```
Input: intervals = [[0,2],[3,4],[5,7]], toBeRemoved = [1,6]
Output: [[0,1],[6,7]]
```

Example 2:


```
Input: intervals = [[0,5]], toBeRemoved = [2,3]
Output: [[0,2],[3,5]]
```

Example 3:

```
Input: intervals = [[-5,-4],[-3,-2],[1,2],[3,5],[8,9]], toBeRemoved = [-1,4]
Output: [[-5,-4],[-3,-2],[4,5],[8,9]]
```

Constraints:

- `1 <= intervals.length <= 10^4`
- `-10^9 <= a_i < b_i <= 10^9`