**Run-length encoding** is a compression algorithm that allows for an integer array nums with many segments of **consecutive repeated** numbers to be represented by a (generally smaller) 2D array encoded. Each encoded[i] = [vali, freqi] describes the ith segment of repeated numbers in nums where vali is the value that is repeated freqi times.

* For example, nums = [1,1,1,2,2,2,2,2] is represented by the **run-length encoded** array encoded = [[1,3],[2,5]]. Another way to read this is "three 1s followed by five 2s".

The **product** of two run-length encoded arrays encoded1 and encoded2 can be calculated using the following steps:

1. **Expand** both encoded1 and encoded2 into the full arrays nums1 and nums2 respectively.
2. Create a new array prodNums of length nums1.length and set prodNums[i] = nums1[i] \* nums2[i].
3. **Compress** prodNums into a run-length encoded array and return it.

You are given two **run-length encoded** arrays encoded1 and encoded2 representing full arrays nums1 and nums2 respectively. Both nums1 and nums2 have the **same length**. Each encoded1[i] = [vali, freqi] describes the ith segment of nums1, and each encoded2[j] = [valj, freqj] describes the jth segment of nums2.

Return *the****product****of*encoded1*and*encoded2.

**Note:** Compression should be done such that the run-length encoded array has the **minimum** possible length.

**Example 1:**

**Input:** encoded1 = [[1,3],[2,3]], encoded2 = [[6,3],[3,3]]

**Output:** [[6,6]]

**Explanation:** encoded1 expands to [1,1,1,2,2,2] and encoded2 expands to [6,6,6,3,3,3].

prodNums = [6,6,6,6,6,6], which is compressed into the run-length encoded array [[6,6]].

**Example 2:**

**Input:** encoded1 = [[1,3],[2,1],[3,2]], encoded2 = [[2,3],[3,3]]

**Output:** [[2,3],[6,1],[9,2]]

**Explanation:** encoded1 expands to [1,1,1,2,3,3] and encoded2 expands to [2,2,2,3,3,3].

prodNums = [2,2,2,6,9,9], which is compressed into the run-length encoded array [[2,3],[6,1],[9,2]].

**Constraints:**

* 1 <= encoded1.length, encoded2.length <= 105
* encoded1[i].length == 2
* encoded2[j].length == 2
* 1 <= vali, freqi <= 104 for each encoded1[i].
* 1 <= valj, freqj <= 104 for each encoded2[j].
* The full arrays that encoded1 and encoded2 represent are the same length.