Given two sentences words1, words2 (each represented as an array of strings), and a list of similar word pairs pairs, determine if two sentences are similar.

For example, words1 = ["great", "acting", "skills"] and words2 = ["fine", "drama", "talent"] are similar, if the similar word pairs are pairs = [["great", "good"], ["fine", "good"], ["acting","drama"], ["skills","talent"]].

Note that the similarity relation **is** transitive. For example, if "great" and "good" are similar, and "fine" and "good" are similar, then "great" and "fine" **are similar**.

Similarity is also symmetric. For example, "great" and "fine" being similar is the same as "fine" and "great" being similar.

Also, a word is always similar with itself. For example, the sentences words1 = ["great"], words2 = ["great"], pairs = [] are similar, even though there are no specified similar word pairs.

Finally, sentences can only be similar if they have the same number of words. So a sentence like words1 = ["great"] can never be similar to words2 = ["doubleplus","good"].

**Note:**

* The length of words1 and words2 will not exceed 1000.
* The length of pairs will not exceed 2000.
* The length of each pairs[i] will be 2.
* The length of each words[i] and pairs[i][j] will be in the range [1, 20].