# 1899. Merge Triplets to Form Target Triplet

# Description

A **triplet** is an array of three integers. You are given a 2D integer array [triplets], where  $[triplets[i] = [a_i, b_i, c_i]$  describes the  $[i^{th}]$  triplet. You are also given an integer array [target = [x, y, z]] that describes the **triplet** you want to obtain.

To obtain target, you may apply the following operation on triplets any number of times (possibly zero):

• Choose two indices (**0-indexed**) i and j (i!=j) and **update** triplets[j] to become [max( $a_i$ ,  $a_j$ ), max( $b_i$ ,  $b_j$ ), max( $c_i$ ,  $c_j$ )].

• For example, if triplets[i] = [2, 5, 3] and triplets[j] = [1, 7, 5], triplets[j] will be updated to [max(2, 1), max(5, 7), max(3, 5)] = [2, 7, 5].

Return [true] if it is possible to obtain the [target] triplet [[x, y, z]] as an element of [triplets], or [false] otherwise.

## Example 1:

```
Input: triplets = [[2,5,3],[1,8,4],[1,7,5]], target = [2,7,5]
Output: true
Explanation: Perform the following operations:
- Choose the first and last triplets [ [2,5,3],[1,8,4], [1,7,5]]. Update the last triplet to be [max(2,1), max(5,7), max(3,5)] = [2,7,5]. triplets = [[2,5,3],[1,8,4], [2,7,5]]
The target triplet [2,7,5] is now an element of triplets.
```

## Example 2:

```
Input: triplets = [[3,4,5],[4,5,6]], target = [3,2,5]
Output: false
Explanation: It is impossible to have [3,2,5] as an element because there is no 2 in any of the triplets.
```

#### Example 3:

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Input: triplets = [[2,5,3],[2,3,4],[1,2,5],[5,2,3]], target = [5,5,5]
Output: true
Explanation: Perform the following operations:
- Choose the first and third triplets [ [2,5,3],[2,3,4], [1,2,5],[5,2,3]]. Update the third triplet to be [max(2,1), max(5,2), max(3,5)] = [2,5,5].
triplets = [[2,5,3],[2,3,4], [2,5,5],[5,2,3]].
- Choose the third and fourth triplets [[2,5,3],[2,3,4], [2,5,5], [5,2,3]]. Update the fourth triplet to be [max(2,5), max(5,2), max(5,3)] = [5,5,5]. triplets = [[2,5,3],[2,3,4],[2,5,5], [5,5,5]].
The target triplet [5,5,5] is now an element of triplets.
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#### **Constraints:**

- 1 <= triplets.length <= 10<sup>5</sup>
- triplets[i].length == target.length == 3
- $1 \le a_i, b_i, c_i, x, y, z \le 1000$