An integer array original is transformed into a **doubled** array changed by appending **twice the value** of every element in original, and then randomly **shuffling** the resulting array.

Given an array changed, return original *if* changed *is a* ***doubled*** *array. If* changed *is not a* ***doubled*** *array, return an empty array. The elements in* original *may be returned in* ***any*** *order*.

**Example 1:**

Input: changed = [1,3,4,2,6,8]  
Output: [1,3,4]  
Explanation: One possible original array could be [1,3,4]:  
- Twice the value of 1 is 1 \* 2 = 2.  
- Twice the value of 3 is 3 \* 2 = 6.  
- Twice the value of 4 is 4 \* 2 = 8.  
Other original arrays could be [4,3,1] or [3,1,4].

**Example 2:**

Input: changed = [6,3,0,1]  
Output: []  
Explanation: changed is not a doubled array.

**Example 3:**

Input: changed = [1]  
Output: []  
Explanation: changed is not a doubled array.

**Constraints:**

* 1 <= changed.length <= 105
* 0 <= changed[i] <= 105