1468 Check If N and Its Double Exist (link)

Description

Given an array `arr` of integers, check if there exist two indices `i` and `j` such that :

- `i != j`
- `0 <= i, j < arr.length`
- `arr[i] == 2 * arr[j]`

Example 1:

```
Input: arr = [10,2,5,3]
Output: true
Explanation: For i = 0 and j = 2, arr[i] == 10 == 2 * 5 == 2 * arr[j]
```

Example 2:

```
Input: arr = [3,1,7,11]
Output: false
Explanation: There is no i and j that satisfy the conditions.
```

Constraints:

- `2 <= arr.length <= 500`
- `-10^3 <= arr[i] <= 10^3`

(scroll down for solution)

Solution

Language: cpp

Status: Accepted

```cpp
#include <unordered_set>
#include <vector>

class Solution {
public:
    bool checkIfExist(std::vector<int>& arr) {
        std::unordered_set<int> seen;

        for (int num : arr) {

            if (seen.count(2 * num) > 0 || (num % 2 == 0 && seen.count(num / 2) > 0))
                return true;
            }
            seen.insert(num);
        }

        return false;
    }
};
```