

Description

Solution

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Submissions

C++

## 473. Matchsticks to Square

Medium

2308

170

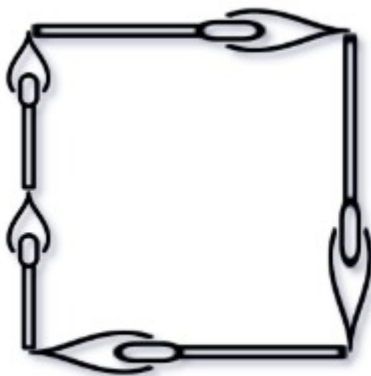
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You are given an integer array `matchsticks` where `matchsticks[i]` is the length of the  $i^{\text{th}}$  matchstick. You want to use **all the matchsticks** to make one square. You **should not break** any stick, but you can link them up, and each matchstick must be used **exactly one time**.

Return `true` if you can make this square and `false` otherwise.

### Example 1:



**Input:** `matchsticks = [1,1,2,2,2]`

**Output:** `true`

**Explanation:** You can form a square with length 2, one side of the square came two sticks with length 1.

### Example 2:

**Input:** `matchsticks = [3,3,3,3,4]`

**Output:** `false`

**Explanation:** You cannot find a way to form a square with all the matchsticks.

### Constraints:

```

2 public:
3     bool canMakeSquare(vector<int>& matchsticks, long int& sum, int& sides, int& pos) {
4         if (pos == matchsticks.size()) {
5             if (sides[0] == sides[1] && sides[1] == sides[2] && sides[2] == sides[3] && sides[3] == sides[0]) {
6                 return true;
7             }
8             return false;
9         }
10        bool used = false;
11        for (int i = pos; i < matchsticks.size(); i++) {
12            if (!used && matchsticks[i] <= sides[pos % 4]) {
13                sides[pos % 4] += matchsticks[i];
14                used = true;
15                if (canMakeSquare(matchsticks, sum, sides, i + 1)) {
16                    return true;
17                }
18            }
19        }
20        return false;
21    }
22    bool canMakeSquare(vector<int>& matchsticks) {
23        long sum = 0;
24        for (int i = 0; i < matchsticks.size(); i++) {
25            sum += matchsticks[i];
26        }
27        if (sum % 4 != 0) {
28            return false;
29        }
30        long sides[4] = {0, 0, 0, 0};
31        return canMakeSquare(matchsticks, sum, sides, 0);

```

Testcase Run Code Re

Accepted Runtime

Your input [1,

Output true

Expected true

Problems

Pick One

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Example cases

?

Run C