

5969. Destroying Asteroids

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You are given an integer `mass` , which represents the original mass of a planet. You are further given an integer array `asteroids` , where `asteroids[i]` is the mass of the  $i^{\text{th}}$  asteroid.

You can arrange for the planet to collide with the asteroids in **any arbitrary order**. If the mass of the planet is **greater than or equal to** the mass of the asteroid, the asteroid is **destroyed** and the planet **gains** the mass of the asteroid. Otherwise, the planet is destroyed.

Return `true` if **all** asteroids can be destroyed. Otherwise, return `false` .

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Medium

Example 1:

**Input:** `mass = 10, asteroids = [3,9,19,5,21]`

**Output:** `true`

**Explanation:** One way to order the asteroids is `[9,19,5,3,21]`:

- The planet collides with the asteroid with a mass of 9. New planet mass: `10 + 9 = 19`
- The planet collides with the asteroid with a mass of 19. New planet mass: `19 + 19 = 38`
- The planet collides with the asteroid with a mass of 5. New planet mass: `38 + 5 = 43`
- The planet collides with the asteroid with a mass of 3. New planet mass: `43 + 3 = 46`
- The planet collides with the asteroid with a mass of 21. New planet mass: `46 + 21 = 67`

All asteroids are destroyed.

Example 2:

**Input:** `mass = 5, asteroids = [4,9,23,4]`

**Output:** `false`

**Explanation:**

The planet cannot ever gain enough mass to destroy the asteroid with a mass of 23. After the planet destroys the other asteroids, it will have a mass of `5 + 4 + 9 + 4 = 22`. This is less than 23, so a collision would not destroy the last asteroid.

Constraints:

- $1 \leq \text{mass} \leq 10^5$
- $1 \leq \text{asteroids.length} \leq 10^5$
- $1 \leq \text{asteroids}[i] \leq 10^5$

C++

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```
1 class Solution {
2     public:
3     bool asteroidsDestroyed(int mass, vector<int>& asteroids) {
4
5     }
6 };
```