

6287. Categorize Box According to Criteria

My Submissions (/contest/biweekly-contest-95/problems/categorize-box-according-to-criteria/submissions/)

Back to Contest (/contest/biweekly-contest-95/)

Given four integers `length`, `width`, `height`, and `mass`, representing the dimensions and mass of a box, respectively, return a string representing the **category** of the box.

User Accepted:	0
User Tried:	2
Total Accepted:	0
Total Submissions:	2
Difficulty:	Easy

- The box is "Bulky" if:
 - **Any** of the dimensions of the box is greater or equal to 10^4 .
 - Or, the **volume** of the box is greater or equal to 10^9 .
- If the mass of the box is greater or equal to `100`, it is "Heavy".
- If the box is both "Bulky" and "Heavy", then its category is "Both".
- If the box is neither "Bulky" nor "Heavy", then its category is "Neither".
- If the box is "Bulky" but not "Heavy", then its category is "Bulky".
- If the box is "Heavy" but not "Bulky", then its category is "Heavy".

Note that the volume of the box is the product of its length, width and height.

Example 1:

Input: length = 1000, width = 35, height = 700, mass = 300

Output: "Heavy"

Explanation:
None of the dimensions of the box is greater or equal to 10^4 .
Its volume = $24500000 \leq 10^9$. So it cannot be categorized as "Bulky".
However mass ≥ 100 , so the box is "Heavy".
Since the box is not "Bulky" but "Heavy", we return "Heavy".

Example 2:

Input: length = 200, width = 50, height = 800, mass = 50

Output: "Neither"

Explanation:
None of the dimensions of the box is greater or equal to 10^4 .
Its volume = $8 * 10^6 \leq 10^9$. So it cannot be categorized as "Bulky".
Its mass is also less than `100`, so it cannot be categorized as "Heavy" either.
Since its neither of the two above categories, we return "Neither".

Constraints:

- $1 \leq \text{length}, \text{width}, \text{height} \leq 10^5$
- $1 \leq \text{mass} \leq 10^3$

JavaScript

Ⓞ

↺

⚙

```
1 const categorizeBox = (l, w, h, m) => {
2   let isBulky = false, a = [l, w, h, m], v = l * w * h, isHeavy = m >= 100, res = "";
3   if (a.some(x => x >= 1e4) || v >= 1e9) isBulky = true;
4   if (isBulky) {
5     if (isHeavy) {
6       res = "Both";
7     } else {
8       res = "Bulky";
9     }
10  } else {
11    if (isHeavy) {
12      res = "Heavy";
13    } else {
14      res = "Neither";
15    }
16  }
17  return res;
18 };
```

☐ Custom Testcase

Use Example Testcases

Run

Submit

Submission Result: **Accepted** (/submissions/detail/873331352/) ⓘ More Details ➤ (/submissions/detail/873331352/)

Share your acceptance!