

5686. Minimum Number of Operations to Move All Balls to Each Box

My Submissions (/contest/weekly-contest-229/problems/minimum-number-of-operations-to-move-all-balls-to-each-box/submissions/)

Back to Contest (/contest/weekly-contest-229/)

You have n boxes. You are given a binary string `boxes` of length n , where `boxes[i]` is `'0'` if the i^{th} box is **empty**, and `'1'` if it contains **one** ball.

In one operation, you can move **one** ball from a box to an adjacent box. Box i is adjacent to box j if $\text{abs}(i - j) == 1$. Note that after doing so, there may be more than one ball in some boxes.

Return an array `answer` of size n , where `answer[i]` is the **minimum** number of operations needed to move all the balls to the i^{th} box.

Each `answer[i]` is calculated considering the **initial** state of the boxes.

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

Example 1:

Input: `boxes = "110"`
Output: `[1,1,3]`
Explanation: The answer for each box is as follows:
1) First box: you will have to move one ball from the second box to the first box in one operation.
2) Second box: you will have to move one ball from the first box to the second box in one operation.
3) Third box: you will have to move one ball from the first box to the third box in two operations, and move one ball from the

Example 2:

Input: `boxes = "001011"`
Output: `[11,8,5,4,3,4]`

Constraints:

- $n == \text{boxes.length}$
- $1 \leq n \leq 2000$
- `boxes[i]` is either `'0'` or `'1'`.

JavaScript

📄 ↺ ⚙️

```
1 /**
2  * @param {string} boxes
3  * @return {number[]}
4  */
5 const minOperations = (s) => {
6     let n = s.length;
7     let res = [];
8     let oneIdx = [];
9     for (let i = 0; i < n; i++) {
10         if (s[i] == '1') oneIdx.push(i);
11     }
12     for (let i = 0; i < n; i++) {
13         let move = 0;
14         for (const idx of oneIdx) {
15             idx >= i ? move += idx - i : move += i - idx;
16         }
17         res.push(move);
18     }
19     return res;
20 };
```

