

6112. Minimum Amount of Time to Fill Cups

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Back to Contest (/contest/weekly-contest-301/)

You have a water dispenser that can dispense cold, warm, and hot water. Every second, you can either fill up 2 cups with **different** types of water, or 1 cup of any type of water.

You are given a **0-indexed** integer array `amount` of length 3 where `amount[0]`, `amount[1]`, and `amount[2]` denote the number of cold, warm, and hot water cups you need to fill respectively. Return the **minimum** number of seconds needed to fill up all the cups.

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

Example 1:

Input: `amount = [1,4,2]`
Output: 4
Explanation: One way to fill up the cups is:
Second 1: Fill up a cold cup and a warm cup.
Second 2: Fill up a warm cup and a hot cup.
Second 3: Fill up a warm cup and a hot cup.
Second 4: Fill up a warm cup.
It can be proven that 4 is the minimum number of seconds needed.

Example 2:

Input: `amount = [5,4,4]`
Output: 7
Explanation: One way to fill up the cups is:
Second 1: Fill up a cold cup, and a hot cup.
Second 2: Fill up a cold cup, and a warm cup.
Second 3: Fill up a cold cup, and a warm cup.
Second 4: Fill up a warm cup, and a hot cup.
Second 5: Fill up a cold cup, and a hot cup.
Second 6: Fill up a cold cup, and a warm cup.
Second 7: Fill up a hot cup.

Example 3:

Input: `amount = [5,0,0]`
Output: 5
Explanation: Every second, we fill up a cold cup.

Constraints:

- `amount.length == 3`
- `0 <= amount[i] <= 100`

JavaScript

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```
1 const fillCups = (a) => {
2   let res = 0;
3   while (!valid(a)) {
4     a.sort((x, y) => x - y);
5     if (a[1] > 0) {
6       a[2]--;
7       a[1]--;
8       res++;
9     } else {
10      res += a[2];
11      break;
12    }
13  }
14  return res;
15 };
16
17 const valid = (a) => a.every(x => x <= 0);
```

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