

# Minimum Operations



There are  $n$  boxes in front of you. For each  $i$ , box  $i$  contains  $r_i$  red balls,  $g_i$  green balls, and  $b_i$  blue balls.

You want to separate the balls by their color. In each operation you can pick a single ball from some box and put it into another box. The balls are separated if no box contains balls of more than one color.

## Input Format

The first line contains a single integer  $n$ . The next  $n$  lines contain three space-separated integers, the  $i^{th}$  line containing  $r_i$ ,  $g_i$ , and  $b_i$ , respectively.

**Note:** In this problem you can modify at most *six* lines of code and you cannot add any new lines.

**To restore the original code in the editor, create a new buffer by clicking on the top left icon in the editor.**

## Constraints

$$1 \leq n \leq 100$$
$$0 \leq r_i, g_i, b_i \leq 105$$

## Output Format

Print the minimal number of operations required to separate the balls. If this is impossible, return  $-1$ .

## Sample Input

```
3
1 1 1
1 1 1
1 1 1
```

## Sample Output

```
6
```

## Explanation

In this case let the first box contain only red balls, the second box only blue balls, and the third box only green balls.

So from the first box 1 blue ball should be moved to the second box and 1 green ball should be moved to the third box.

From the second box 1 red ball should be moved to the first box and 1 green ball should be moved to the third box. Likewise for the third row. So the number of operations is 6.