

# PEG Test '14 - Balance

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**Time limit:** 1.0s    **Memory limit:** 16M

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## PEG Test – Oct 3rd, 2014

Korra is trying to restore balance to the world. But before that, she must restore balance in some numbers. Given  $N$  ( $1 \leq N \leq 10$ ) numbers, Korra wants to split them into two (possibly empty) groups, such that their sums are as close as possible.

Output the minimum difference between the two groups of numbers.

## Input Specification

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The first line will contain the integer  $N$ , representing the number of numbers Korra has.

The second line will contain  $N$  positive integers (each no greater than 1 000), the numbers that Korra is trying to split.

## Output Specification

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Output a single line containing a single integer – the minimum difference of the sum of the two groups of numbers.

## Sample Input 1

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```
5
8 12 16 100 20
```

## Sample Output 1

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```
44
```

## Sample Input 2

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```
9
1 8 5 9 7 2 3 4 6
```

## Sample Output 2

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