# Fair Division

There is a set of **n** gifts, each with a worth determined by its weight. As the weight increases, so does the value of the gift. Your task is to divide these gifts into two groups in a way that minimizes the difference in total weight between the two groups.

**Input Format**

- The first input line contains an integer n which is the number of gifts
- The next line contains n space-separated integers, which are the weights of each gift.

**Constraints**

- 1 ≤ n ≤ 20
- 1 ≤ weight of a gift ≤ 10^9

**Output Format**

- Print one integer: the minimum difference between the weights of the groups.

**Sample Input 0**

```
5
3 2 7 4 1
```

**Sample Output 0**

```
1
```

**Explanation 0**

Group 1 has weights 2, 3 and 4 (total weight 9), and group 2 has weights 1 and 7 (total weight 8).

Therefore, the difference between the weights of two groups is 1