# Problem D
## Dutch Democracy
### Time limit: 2 seconds

The process of forming the Dutch government has taken more than half a year for three elections in a row. Perhaps we can streamline the initial stages of coalition building?

The first step after the election results is to find a group of parties (called a *coalition*) with enough seats to have a strict majority. Your task is to count the number of candidate coalitions that satisfy specific conditions. A coalition is considered a *candidate coalition* if it meets these two criteria:

**Strict Majority:** The total number of seats held by the coalition must be strictly more than half of the total seats across all parties.

**No Superfluous Parties:** The coalition must be minimal in the sense that removing any one party from the coalition would cause it to lose its strict majority.

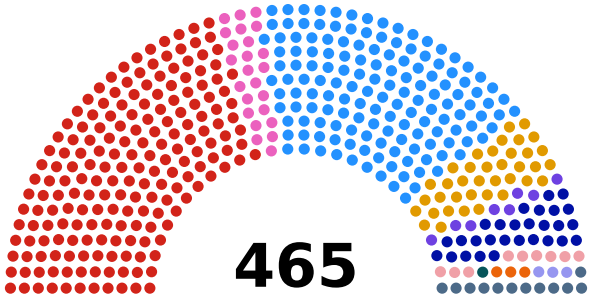



Figure D.1: Illustration of Sample Input 2.

## Input

The input consists of:

- One line with an integer $n$ ($1 \leq n \leq 60$), the number of parties.
- One line with $n$ integers $p$ ($1 \leq p \leq 10\,000$), the number of seats each party has.

## Output

Output the total number of candidate coalitions that satisfy the criteria above.

| Sample Input 1 | Sample Output 1 |
|---|---|
| 5<br>3 1 4 1 5 | 4 |

| Sample Input 2 | Sample Output 2 |
|---|---|
| 11<br>191 24 148 38 8 28 9 1 3 3 12 | 38 |

| Sample Input 3 | Sample Output 3 |
| --- | --- |
| 4<br>1 2 3 4 | 3 |