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.

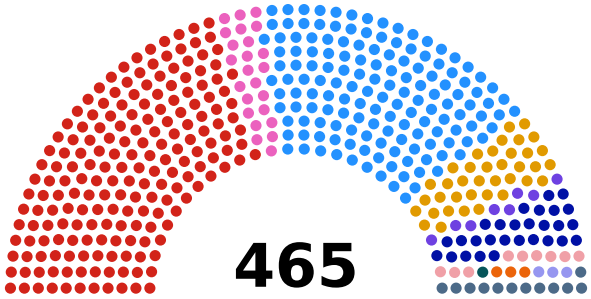

Figure D.1: Illustration of Sample Input 2.

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 3 1 4 1 5	4

Sample Input 2	Sample Output 2
11 191 24 148 38 8 28 9 1 3 3 12	38

Sample Input 3	Sample Output 3
4 1 2 3 4	3