

MENDO

System for competitions in informatics 2026

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Exam

Professor Mile has a collection of N exam questions where each question is worth a certain number of points P_i , $1 \leq i \leq N$. Professor Mile is a very superstitious person and he believes that the numbers 4 and 6 are his lucky numbers. Therefore at each exam he employs the following scenario:

There are exactly 4 students taking the exam and he chooses a set of 6 questions from his collection for the students to answer. The professor wants to choose the set of questions so he will be able to distribute them to the students in a way that each question is given to exactly one student and the total points of the question(s) each student has are equal.

So, for questions which are worth:

Question 1: 2 points
Question 2: 2 points
Question 3: 4 points
Question 4: 5 points
Question 5: 3 points
Question 6: 3 points
Question 7: 5 points

Professor Mile can choose Question 1, Question 2, Question 4, Question 5, Question 6 and Question 7 i.e. we can write that he can choose the set of questions: $\{1,2,4,5,6,7\}$.

One possible distribution in which Mile can distribute these questions to the students is by giving Questions 1 and 5 to one student (the total points are equal to $2+3=5$), giving Question 4 to another student (the total points are equal to $5=5$), Question 7 to another student (the total points are equal to $5=5$), and Questions 2 and 6 to the last/fourth student (the total points are equal to $2+3=5$).

Help Mile to calculate the number of ways he can choose a set of 6 questions.

Input

line 1: N , the number of questions in the collection
line 2: N integers $P_1, P_2, P_3, \dots, P_N$ separated with one space, where P_i is the number of points the i^{th} question worths.

Subtasks

(8 points) $6 \leq N \leq 20$, $1 \leq P_i \leq 10\,000\,000$

(15 points) $6 \leq N \leq 3000$, $1 \leq P_i \leq 10\,000\,000$. There are exactly 3 different values in the list $P_1, P_2, P_3, \dots, P_N$.

(20 points) $6 \leq N \leq 3000$, $1 \leq P_i \leq 10\,000\,000$. Each number that is in the list $P_1, P_2, P_3, \dots, P_N$ appears exactly twice.

(12 points) $6 \leq N \leq 150$, $1 \leq P_i \leq 10\,000\,000$

(15 points) $6 \leq N \leq 1000$, $1 \leq P_i \leq 1\,000$

(10 points) $6 \leq N \leq 1000$, $1 \leq P_i \leq 10\,000\,000$

(20 points) $6 \leq N \leq 3\,000$, $1 \leq P_i \leq 10\,000\,000$

Output

line 1: one integer, the number of ways professor Mile can choose the set of questions.

Constraints

Time limit: 1 second
Memory limit: 500 megabytes

Examples

input

7
2 2 4 5 3 3 5

output

1

https://mendo.mk/Task.do?id=681

1/2

```
input
7
2 2 3 3 5 5 5
```

```
output
3
```

```
input
6
5 5 5 5 5 5
```

```
output
0
```

Explanation for test case 1: As explained above, one set of questions professor Mile can choose is: $\{1,2,4,5,6,7\}$. In fact this is the only way he can choose a set of questions as required in the problem.

Explanation for test case 2: There are 3 possible sets of 6 questions that can be distributed to all 4 students according to the given rule. These sets are: $\{1,2,3,4,5,6\}$, $\{1,2,3,4,5,7\}$ and $\{1,2,3,4,6,7\}$. Hence, professor Mile has 3 ways of choosing a set of 6 questions.

Explanation for test case 3: There is no possible way he can choose a set of 6 questions.

Submit Test

Submit your code

Solution language:

Automatic Detection...



Upload solution (option 1):

Select

Paste your code (option 2):



CodeMirror

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