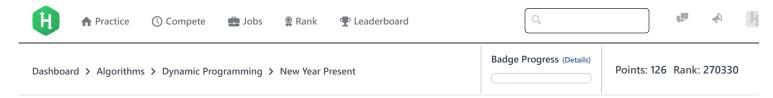
16/11/2017 HackerRank



New Year Present





Nina received an odd New Year's present from a student: a set of n unbreakable sticks. Each stick has a length, l, and the length of the i^{th} stick is l_{i-1} . Deciding to turn the gift into a lesson, Nina asks her students the following:

How many ways can you build a square using exactly ${f 6}$ of these unbreakable sticks?

Note: Two ways are distinct if they use at least one different stick. As there are $\binom{n}{6}$ choices of sticks, we must determine which combinations of sticks can build a square.

Input Format

The first line contains an integer, n, denoting the number of sticks. The second line contains n space-separated integers $l_0, l_1, \ldots, l_{n-2}, l_{n-1}$ describing the length of each stick in the set.

Constraints

- $6 \le n \le 3000$
- $1 \le l_i \le 10^7$

Output Format

On a single line, print an integer representing the number of ways that $\bf 6$ unbreakable sticks can be used to make a square.

Sample Input 0

8 4 5 1 5 1 9 4 5

Sample Output 0

3

Sample Input 1

6 1 2 3 4 5 6

Sample Output 1

0

Explanation

Sample (

Given 8 sticks (l = 4, 5, 1, 5, 1, 9, 4, 5), the only possible side length for our square is 5. We can build square S in 3 different ways:

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1. S = \{l_0, l_1, l_2, l_3, l_4, l_6\} = \{4, 5, 1, 5, 1, 4\}
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2.
$$S = \{l_0, l_1, l_2, l_4, l_6, l_7\} = \{4, 5, 1, 1, 4, 5\}$$

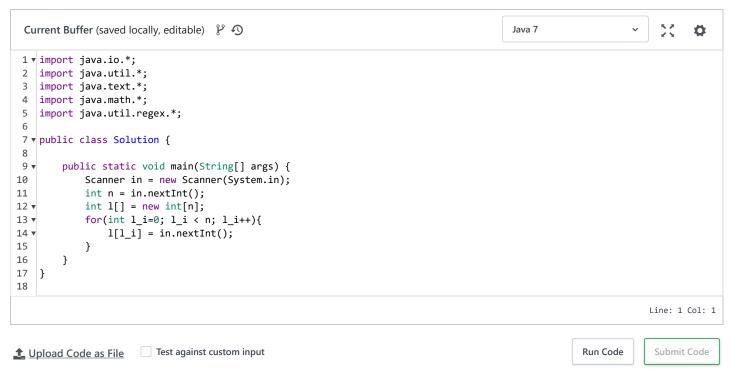
3.
$$S = \{l_0, l_2, l_3, l_4, l_6, l_7\} = \{4, 1, 5, 1, 4, 5\}$$

In order to build a square with side length $\mathbf{5}$ using exactly $\mathbf{6}$ sticks, l_0, l_2, l_4 , and l_6 must always build two of the sides. For the remaining $\mathbf{3}$ sticks of length $\mathbf{5}$ (l_1, l_3 , and l_7).

Sample 1

We have to use all $\bf 6$ sticks, making the largest stick length ($\bf 6$) the minimum side length for our square. No combination of the remaining sticks can build $\bf 3$ more sides of length $\bf 6$ (total length of all other sticks is $\bf 1+2+3+4+5=15$ and we need at least length $\bf 3*6=18$), so we print $\bf 0$.

in
Submissions:178
Max Score:80
Difficulty: Hard
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