

Coding Arena

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Problem : Base 6

Given a sequence of distinct numbers a_1, a_2, \dots, a_n , an inversion occurs if there are indices $i < j$ such that $a_i > a_j$.

For example, in the sequence 2 1 4 3 there are 2 inversions (2 1) and (4 3).

The input will be a main sequence of N positive integers. From this sequence, a Derived Sequence will be obtained using the following rule. The output is the number of inversions in the derived sequence.

Rule for forming derived sequence

An integer may be represented in base 6 notation. In base 6, 10305 is $1 \times 6^4 + 3 \times 6^2 + 5 = 1409$. Note that none of the digits in that representation will be more than 5.

The sum of digits in a base 6 representation is the sum of all the digits at the various positions in the representation. Thus for the number 1409, the representation is 10305, and the sum of digits is $1+0+3+0+5=9$. The sum of digits may be done in the decimal system, and does not need to be in base 6.

The derived sequence is the sum of the digits when the corresponding integer is represented in the base 6 form number will be expressed in base 6, and the derived sequence is the sum of the digits of the number in the base 6 representation.

Input Format:

The first line of the input will have a single integer, which will give N .

The next line will consist of a comma separated string of N integers, which is the main sequence

Output Format:

The number of inversions in the derived sequence formed from the main sequence.

Constraints:

$N \leq 50$

Integers in sequence $\leq 10^7$

Sample Input and Output

SNo.	Input	Output
1	5 55, 53, 88, 27, 33	2
2	8 120,21,47,64,72,35,18,98	11

Explanation for example 1:

The number of integers is 5, as specified in the first line. The given sequence is 55, 53, 88, 27, 33.

The base6 representation is 131, 125, 224, 43, 53 The derived sequence is 5,8,8,7,8 (corresponding to the sum of digits). The number of inversions in this is 2, namely (8, 7), (8, 7)

Explanation for example 2:

The base 6 representation of this is 320,33,115,144,200,55,30,242, and the derived sequence (sum of digits) is 5,6,7,9,2,10,3,8. The number of inversions is 11 (5,2), (5,3),(6,2) (6,3), (7,2), (7,3) (9,2),(9,3) (9,8),(10,3), (10,8)

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Note:

For C and C++, return type of main() function should be int.

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