**Shortest Distance**

The city of San Marcos is surveying several streets that have similarly painted houses. They would like to find out which pair of same-colored houses are the closest to each other. Each house will be represented by an integer, which represents the color of the house. Do you think you can find the shortest distance between a pair of houses that are painted the same color?

**Input:** The first line of input contains **T**, the number of test cases. Each test case consists of two lines. The first line contains **N**, the number of elements in the next line. The next line contains **N** space-separated integers.

**Output:** You will output “CASE #(case number): “ followed by the shortest distance for that test. If there happens to be no pairs of similarly painted houses, you will output -1 as the answer.

**Example Input:**

3

5

3 2 1 2 3

6

7 1 3 4 1 7

4

1 2 3 4

**Example Output:**

CASE #1: 2

CASE #2: 3

CASE #3: -1

**Explanation:** In the first test case, the integers “2” are 2 indices apart, which is the shortest distance between any similar pairs of numbers.

In the second test case. The pair of 1’s are three indices apart, which is the shortest distance.