Assignment Case	
COMP6047 Algorithm and Programming	
Computer Science	**<Case Code>**
***Valid on** Compact Semester Year 2019/2020*	**Revision 00**

Soal
Case

Search the Median

Jojo just learned searching topic in his programming class. To improve his knowledge further, Jojo asked his lab assistant to give him a question about the searching topic. Here it is the question: There are N integers in an array A. You are given a number X, which is one of the integers in A. You are to find the index position of X in array A after sorting A in ascending order. The position will split the array into two subset, left subset and right subset. If left subset has odd number of members, then find the median of left subset. Otherwise, find the median of right subset.

Format Input

The input starts with an integer T, the number of test cases. Each test case starts with an integer N, total integer in array A. It is guaranteed N is even. The next line consists of N space separated integers, representing the array A. It is guaranteed there will be no duplicate integer in the array. The last line contains an integer X, the integer to be searched in the array. It is guaranteed X is one of the integers in A.

Format Output

For each test cases, output "Case X: Y", where X represents the number of test case, and Y is the median.

Constraints

$1 \leq T \leq 100$

$2 \leq N \leq 1000$

$-100{,}000 \leq X, A_i \leq 100{,}000$

Sample Input	Sample Output
1 6 1 3 5 7 9 11 7	Case #1: 3

Explanation:

The number 7 splits the array into two subsets, where the left subset contains {1, 3, 5}, and the right subset contains {9, 11}. Since left subset has odd amount of members, find the median from the left subset, which is 3.

Note:

Don't forget to add the newline character after printing the output.