DSA Trial Competition

‘Boolean switch search’

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Problem description:-

We have a very long array of boolean values, where the first value is known to be true and the last value false. You are tasked with finding the position in the array where a true value is immediately followed by false.
The input format is as follows:
The first line contains a single integer representing the number of test cases.
For each test case, a number n ($2 \leq n \leq 10^9$) is provided, representing the length of the zero-indexed array.
The input will then proceed interactively based on your program's output. When your program outputs a single line in the format READ x, where x is an integer between 0 and n − 1, the system will return either true or false, indicating the value at position x in the array.
Once you find a position where a true value is immediately followed by false, your program should output a line in the format OUTPUT x, where x is the index of that position. The system will then move to the next test case.

Sample input/output:-

The input box contains the input, but additionally, after the array length, there is a line containing all values of the array, with booleans represented by 0 and 1. The input (and output) after that is a sample interactive session.

Input	**Output**
1 5 1 1 0 1 0 false true	READ 2 READ 1 OUTPUT 1