

## 6609 Minimal Subarray Length

You are given an integer sequence of length  $N$  and another value  $X$ . You have to find a contiguous subsequence of the given sequence such that the sum is greater or equal to  $X$ . And you have to find that segment with minimal length.

### Input

First line of the input file contains  $T$  the number of test cases. Each test case starts with a line containing 2 integers  $N$  ( $1 \leq N \leq 500000$ ) and  $X$  ( $-10^9 \leq X \leq 10^9$ ). Next line contains  $N$  integers denoting the elements of the sequence. These integers will be between  $-10^9$  to  $10^9$  inclusive.

### Output

For each test case output the minimum length of the sub array whose sum is greater or equal to  $X$ . If there is no such array, output '-1'.

### Sample Input

```
3
5 4
1 2 1 2 1
6 -2
-5 -6 -7 -8 -9 -10
5 3
-1 1 1 1 -1
```

### Sample Output

```
3
-1
3
```