

22C:16 Quiz 11

The two problems in this quiz involve writing a little bit of code - at most 4-6 lines each. If you see yourself writing too much, it is time to stop and think. Turn the page for the second problem.

1. You are given a list `L` of numbers and your task is to write a *recursive* function to determine if `L` is sorted in ascending order. Use the following function header:

```
def isSorted(L):
```

and note that the function should return a boolean value, depending on whether `L` is sorted. For example, if `L` is `[3, 7, 7, 19, 21, 21]` then the function should return `True`.

Of course this problem can be solved non-recursively, but you will not receive any credit for a non-recursive solution, even if it is correct. And, by the way, do not forget to specify the base cases.

Hint: `L` is sorted if (i) the first item in `L` is less than or equal to the second item and (ii) the sublist of `L` excluding the first element is sorted.

2. You are given a list L of numbers and your task is to write a *recursive* function to determine the minimum number in L. Use the following function header:

```
def minimum(L):
```

For example, if L is [21, 3, 7, 67, 19, 210, 21] then the function should return 3.

Of course this problem can be solved non-recursively, but you will not receive any credit for a non-recursive solution, even if it is correct. And, by the way, do not forget to specify the base cases.

Hint: To find the minimum number in L first find the minimum number in the sublist of L that excludes the first element. Then you just have to compare this with the first element in L to determine the answer.