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Problem 5

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Problem 5

1/1 point (graded)
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Here is code for linear search that uses the fact that a set of elements is sorted in increasing order:

```
def search(L, e):
    for i in range(len(L)):
        if L[i] == e:
            return True
        if L[i] > e:
            return False
    return False
```

Consider the following code, which is an alternative version of `search`.

```
def newsearch(L, e):
    size = len(L)
    for i in range(size):
        if L[size-i-1] == e:
            return True
        if L[i] < e:
            return False
    return False
```

Which of the following statements is correct? You may assume that each function is tested with a list `L` whose elements are sorted in increasing order; for simplicity, assume `L` is a list of positive integers.

- ☐ `search` and `newsearch` return the same answers for all `L` and `e`.
- ☐ `search` and `newsearch` return the same answers provided `L` is non-empty.
- ☐ `search` and `newsearch` return the same answers provided `L` is non-empty and `e` is in `L`.
- ☐ `search` and `newsearch` never return the same answers.
- ☒ `search` and `newsearch` return the same answers for lists `L` of length 0, 1, or 2.
- ☐ `search` and `newsearch` return the same answers for lists `L` of length 0 or 1.



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Problem 5

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