## **Quicksort Practice**

Select the first item in the list as the pivot and <u>scan from the end opposite of the current pivot placement</u>.

| A | 0 | 1 | 2 | 3 | 4  | 5  | 6 | 7  | 8 | 9 |
|---|---|---|---|---|----|----|---|----|---|---|
|   | 7 | 3 | 9 | 4 | 10 | 15 | 1 | 12 | 5 | 6 |

Show the contents of the array after the first complete partition (ascending order):

| A | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |   |

After the second complete partition (left side):

| A | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |   |

<u>After initial left partition is completely sorted</u> and after 1<sup>st</sup> right partition:

| A | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |   |

Select the first item in the list as the pivot and scan from the end opposite of the current pivot placement.

| A | 0 | 1 | 2 | 3 | 4   | 5 | 6 | 7 | 8  | 9  |  |
|---|---|---|---|---|-----|---|---|---|----|----|--|
|   | 5 | 9 | 4 | 8 | 850 | 2 | 7 | 3 | 10 | 15 |  |

Show the contents of the array after the first complete pass through quicksort (ascending order):

| A | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |   |

After the second complete partition (left side):

| A | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |  |
|---|---|---|---|---|---|---|---|---|---|---|--|
|   |   |   |   |   |   |   |   |   |   |   |  |

After first left partition is completely sorted and after 1st pass on right partition:

| A | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |   |   |   |   |