COSC 311: Algorithms
Mini 3
Due Monday, September 24 in class

1. Quicksort. Here's an unsorted array. Run quicksort on the array, showing what the array looks like *after* each partition step is complete, assuming you are using the last element as the partition element (you should *not* show the intermediate steps taken while partitioning). You can show the left and right recursions in the same picture.

2	11	6	14	1	10	4	7	16	15	12	3	8	5	13	9

2. Induction. Suppose you were going to prove by induction that a certain claim holds for all powers of 2, starting with 1. What steps would you take to prove this? Explain in your own words why those steps form a complete, convincing proof.