Name:_____   Name: _____

Name:_____   Name: _____

Quicksort Running Time

1. How many times can two elements be compared by a single run of the Quicksort algorithm?

2. How many comparisons will be performed by Quicksort if we always pick the median element as the pivot? You only need to consider the case when **n = 8**. You should draw a recursion tree and note how many comparisons are performed at each subproblem.

3. What is the probability that any two numbers are compared?