

Question 3

- a) 11 times
- b) 7 times
- c) In the first array, our pivot is always the lowest number in the array therefore there will always be more elements to the right side of the wall, and we would call the method more times. In the second array, as the different numbers are not in order, the array better utilizes the recursive properties of the quick sort algorithm and the array is divided evenly.
- d) Choosing a random element minimizes the chance of always choosing either the smallest or largest number which would unevenly divide the array between the wall. This is mainly the case when the array is either fully or partially sorted or reverse-sorted.