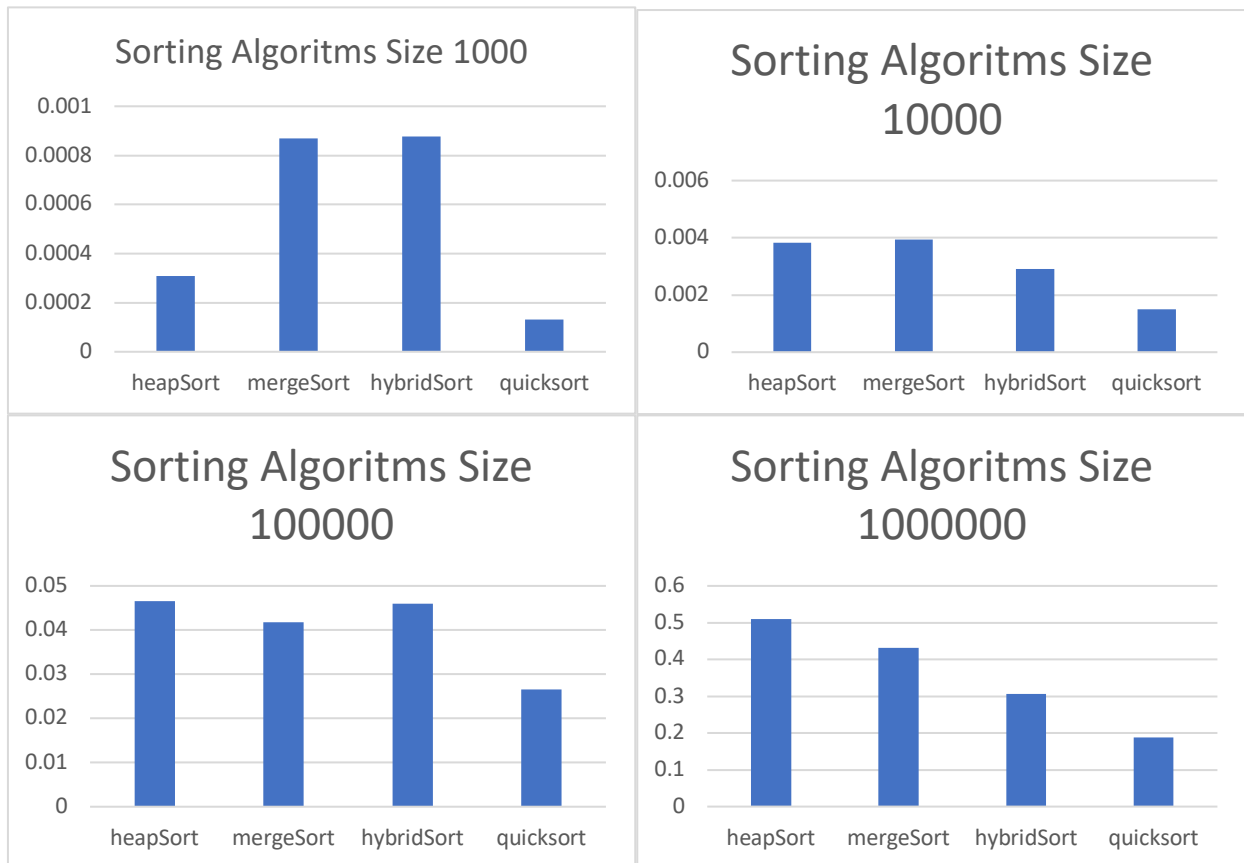Q1)
isSorted bigO n
bubbleSort bigO n^2
selectionSort bigO n^2

Q1 e)

heapSort bigO: n*log(n)
mergeSort bigO: n*log(n)
hybridSort bigO: log(n)
quickSort bigO: somewhere between n*log(n) and log(n)

Q2 b)
Using the nonlinear time method, the resulting array is:
1 3 2 6 7 5 4 15 14 12 9 10 11 13 8
Steps:
10
10 12
1 12 10

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

Using the linear time method, the resulting array is:
```
1 3 2 6 7 5 4 15 14 12 9 10 11 13 8
10
10 12
1 12 10
1 12 10 14
1 6 10 14 12
1 6 5 14 12 10
1 6 5 14 12 10 8
1 6 5 14 12 10 8 15
1 3 5 6 12 10 8 15 14
1 3 5 6 9 10 8 15 14 12
1 3 5 6 7 10 8 15 14 12 9
1 3 4 6 7 5 8 15 14 12 9 10
1 3 4 6 7 5 8 15 14 12 9 10 11
1 3 4 6 7 5 8 15 14 12 9 10 11 13
1 3 2 6 7 5 4 15 14 12 9 10 11 13 8
```