Homework #3: Ananlysis of Sort Algorithms

Use the supplied code to analyze the following from text:
- InsertionSort
- MergeSort
- HeapSort
- QuickSort1 [based on book]
- Quicksort2 [library funtion]

All the above algorithms except InsertSort ($O(n^2)$) have an average complexity of $O(n \lg n)$. But the constants may be different for each.

Generate data and Analyze the
- average case
- best case
- worst case

performance of the three algorithms for different sizes of n
- 1,000
- 10,000
- 100,000
- 1000,000
- 10,000,000
- 100,000,0000
- 1000,000,000 [optional]

Write a 2-3 page report analyzing your results.

Deliverables
- **submit results**
- **report**

Deadline and Late Submissions
- The assignment is due on the date specified above at 11:59:59 PM
- Each day late will incur a penalty of 10% of the grade for the assignment; for example, if the assignment is 3 days late, the maximum grade will be 85 out of 100—15 will be subtracted from whatever grade is assigned.