**Summary of Sorting**

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| --- | --- | --- |
|  | Best-case Cost | Worst-case Cost |
| Selection | O(n2) | O(n2) |
| Insertion | O(n) | O(n2) |
| Heap | O(n log n) | O(n log n) |
| Merge | O(n log n) | O(n log n) |
| Quick | O(n log n) | O(n2) |

* Selection sort performs the least swaps, O(n), in the worst case.
* Insertion sort is best if the array is nearly or already sorted.
* Heap sort performs a constant factor more comparisons than Merge sort
* Merge sort requires extra storage proportional in size to the input.
* Quick sort typically (expected case) outperforms Heap and Merge sort because of its simplicity.