

## Comparison

Insertion sort	Quick sort	Heap sort
For small arrays or already sorted arrays, insertion sort works faster than the other two algorithms with a time complexity of $\theta(n)$ , and it's easy to implement.	Quick sort is easier to implement than heap sort and is usually faster than insertion sort and heap sort.	Heapsort guaranteed time complexity of $O(n \log n)$ , meanwhile only has $O(1)$ space complexity. But it's not as stable as other two algorithms. It can be used in OS priority queues, which is to find the max value.