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**Bubble sort** is the sorting algorithm which has time complexity of order  $O(N^2)$  which proves to be very less efficient way of sorting numbers among five. This is the one taking the maximum time for sorting.

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**Selection sort** has nearly same time complexity as that of Bubble sort of the order  $O(N^2)$ . But it is slightly more efficient than bubble sort.

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**Insertion sort** is the one which is efficient than Selection sort which also has the time complexity of the order  $O(N^2)$ , here less number of comparisons take place. It is quite efficient and takes around half the time taken by the above two.

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**Quick sort** is a very efficient way of sorting numbers, it has time complexity of order  $O(N \log N)$ . This is one of the efficient ways of sorting. An internal function called “qsort()” is also based on the same algorithm and is quite efficient.

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**Merge sort** is also a very efficient way of sorting. It has equal time complexity as of quick sort. It is an application of one of those algorithms which come under the efficient benchmark.

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