**Merge Sort**

* efficient, general-purpose
* comparison-based sorting algorithm
* sorts by breaking it into halves, sort, and
* then merging together
* works in recursion
* divide and conquer

John von Neumann

1945

**VARIATIONS**

Abstract In-place

Bottom-up

Top-down

**ALGORITHM**

1. Find the mid-point to divide the array in half, as evenly as possible.
2. Call mergeSort for left half
3. Call mergeSort for right half
4. Merge both halves

\* Follows preorder traversal