Merge Sort (Time Complexity)

best, average and worst case time complexity of the merge sort algorithm (Reading time: under 1 minute)

TIME			SPACE
Best	**Average**	**Worst**	**Worst**
O(n log(n))	O(n log(n))	O(n log(n))	O(n)

Best, average and worst:

Each partitioning takes **O(n)** operations, and every partitioning splits the array **O(log(n))**. This results in **O(n log(n))**.

Worst space:

We save three variables for each element in the array.