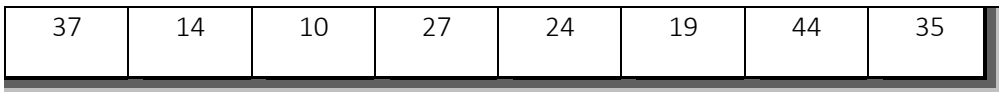
Sorting

A sorting algorithm will put items in a list into a particular order, which may be alphabetic or numeric. As sorting a large list of items can be timely computer algorithms have been developed to do the work for us.

Merge Sort

The merge sort is a sorting technique based on the idea of 'divide and conquer'. A merge sort first divides a list into two equal halves and then combines them in a sorted list.

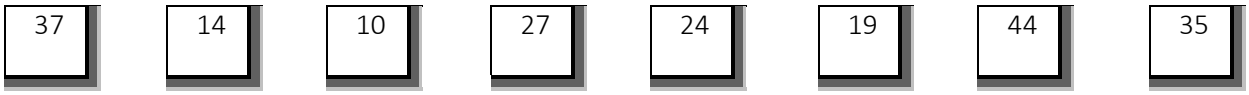
To understand how the merge sort works we will use a merge sort algorithm to sort the following list:



We need to divide the list into two equal halves.

We then split the halves into half

We keep dividing the list until each list is a single item.



We then combine them in the same way they were divided but in order.

In the next move (iteration) we combine the lists to make lists of 4 sorted items.

After the final iteration the list should be fully sorted.