**2.3-1.**

Using Figure 2.4 as a model, illustrate the operation of merger sort on ehr array $A = \langle 3, 41, 52, 26, 38, 57, 9, 49 \rangle$.

**Answer.**

Figure 1 illustrates the operation of merge sort on the array $A = \langle 3, 41, 52, 26, 38, 57, 9, 49 \rangle$.
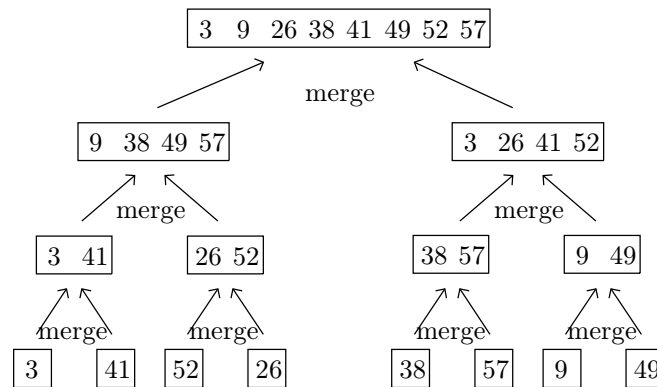


**Figure 1.** The operation of merge sort on the array $A = \langle 3, 41, 52, 26, 38, 57, 9, 49 \rangle$. The lengths of the sorted sequences being merged increase as the algorithm progresses from bottom to top.