Value

index



Initial values     After first iteration     After second iteration     After third iteration

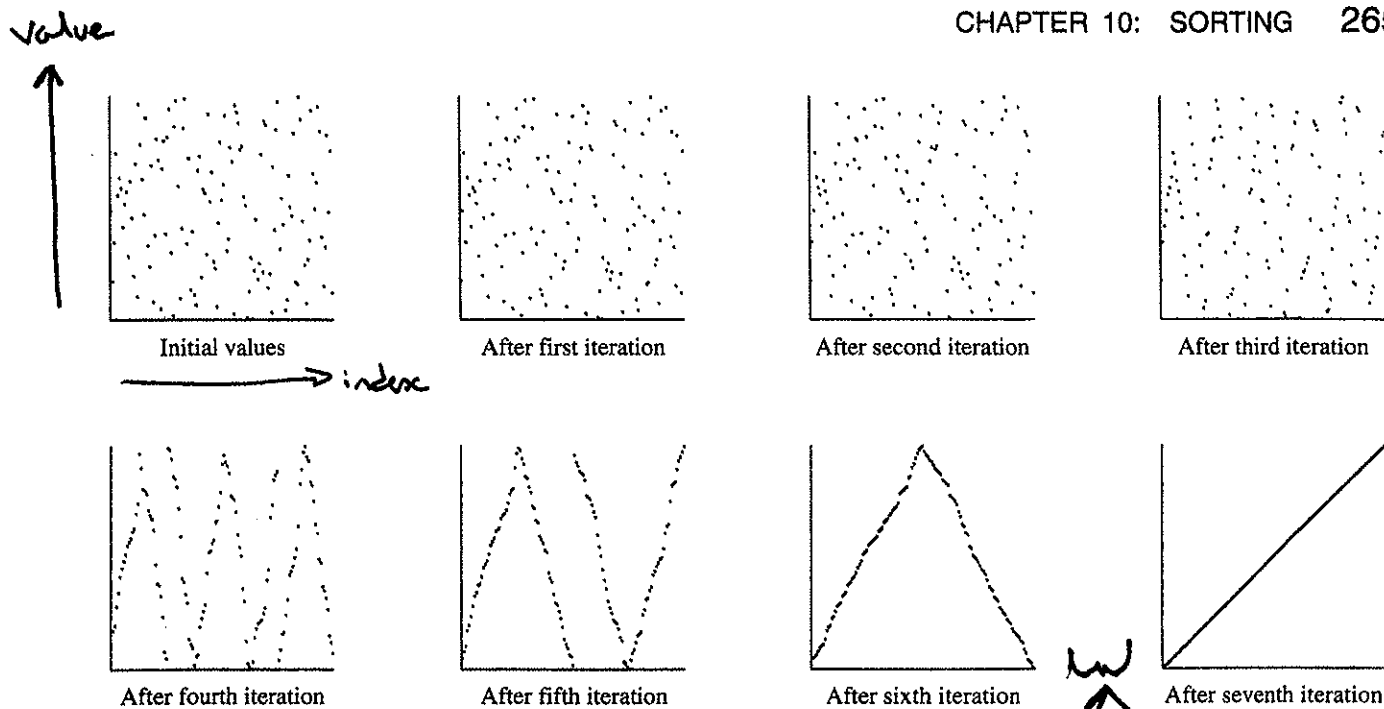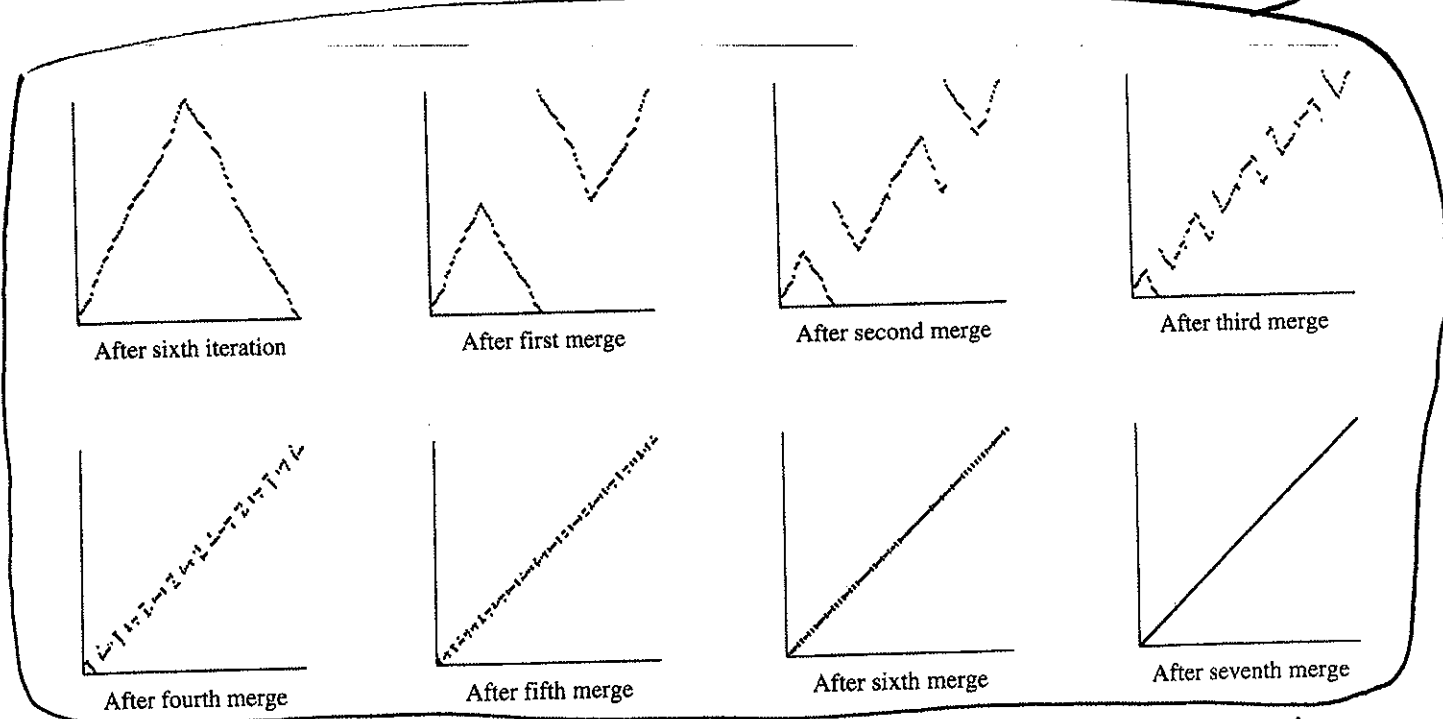After fourth iteration     After fifth iteration     After sixth iteration     After seventh iteration

E 10-11    Iterations of bitonic mergesort. The list has 128 elements; hence the sort requires log 128 = 7 iterations. Iteration $i$ has $i$ compare-exchange steps, for $1 \leq i \leq 7$.



After sixth iteration     After first merge     After second merge     After third merge

After fourth merge     After fifth merge     After sixth merge     After seventh merge

GURE 10-9    Given a bitonic sequence of length $n = 2^k$, log $n$ compare-exchange steps transform it into a sorted sequence. In this example seven compare-exchange steps transform a bitonic sequence of length 128 into a sorted sequence of length 128.

These are copied from Quinn, Parallel Computing: Theory & Practice.

10.9 is a close up of what happens between 'sixth' at 'seventh' iterations of 10-11. Similar (but shorter) sequences occur between each pair of iterations in 10-11.