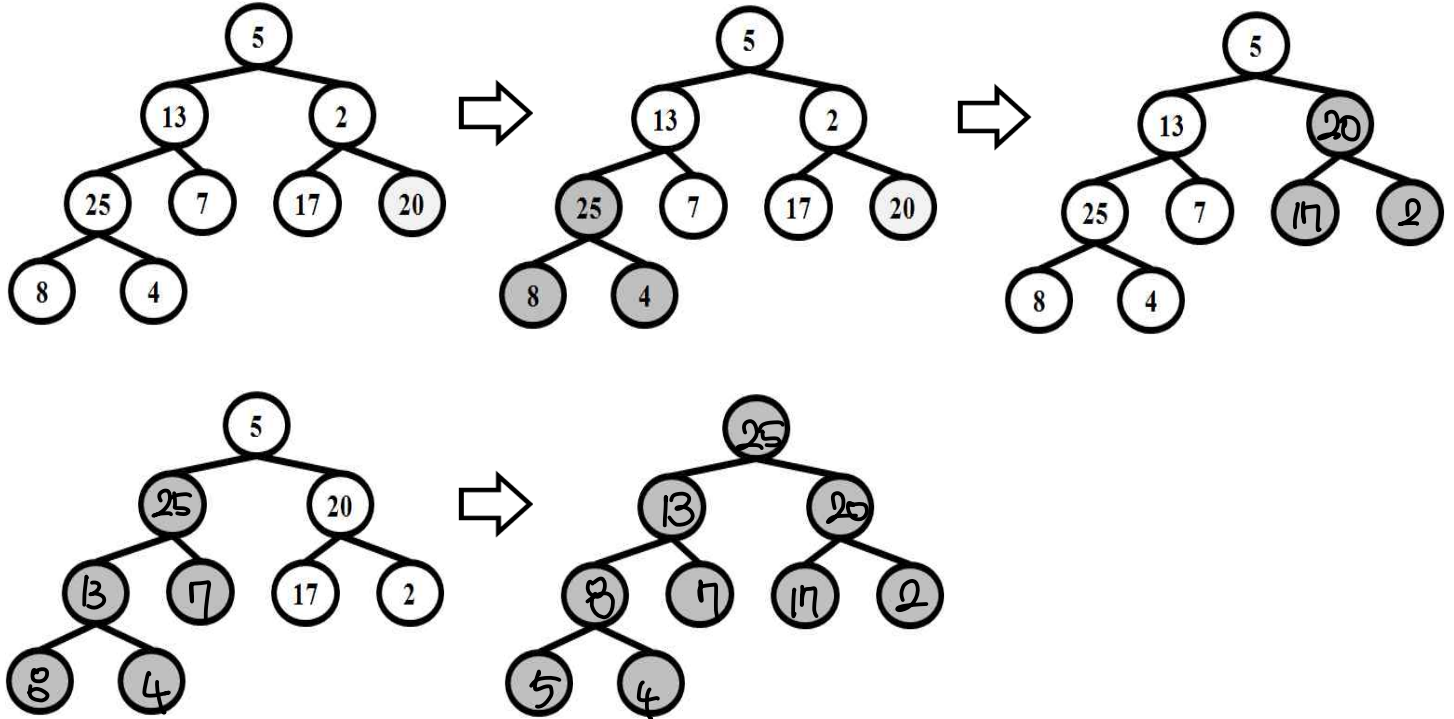


Review 5

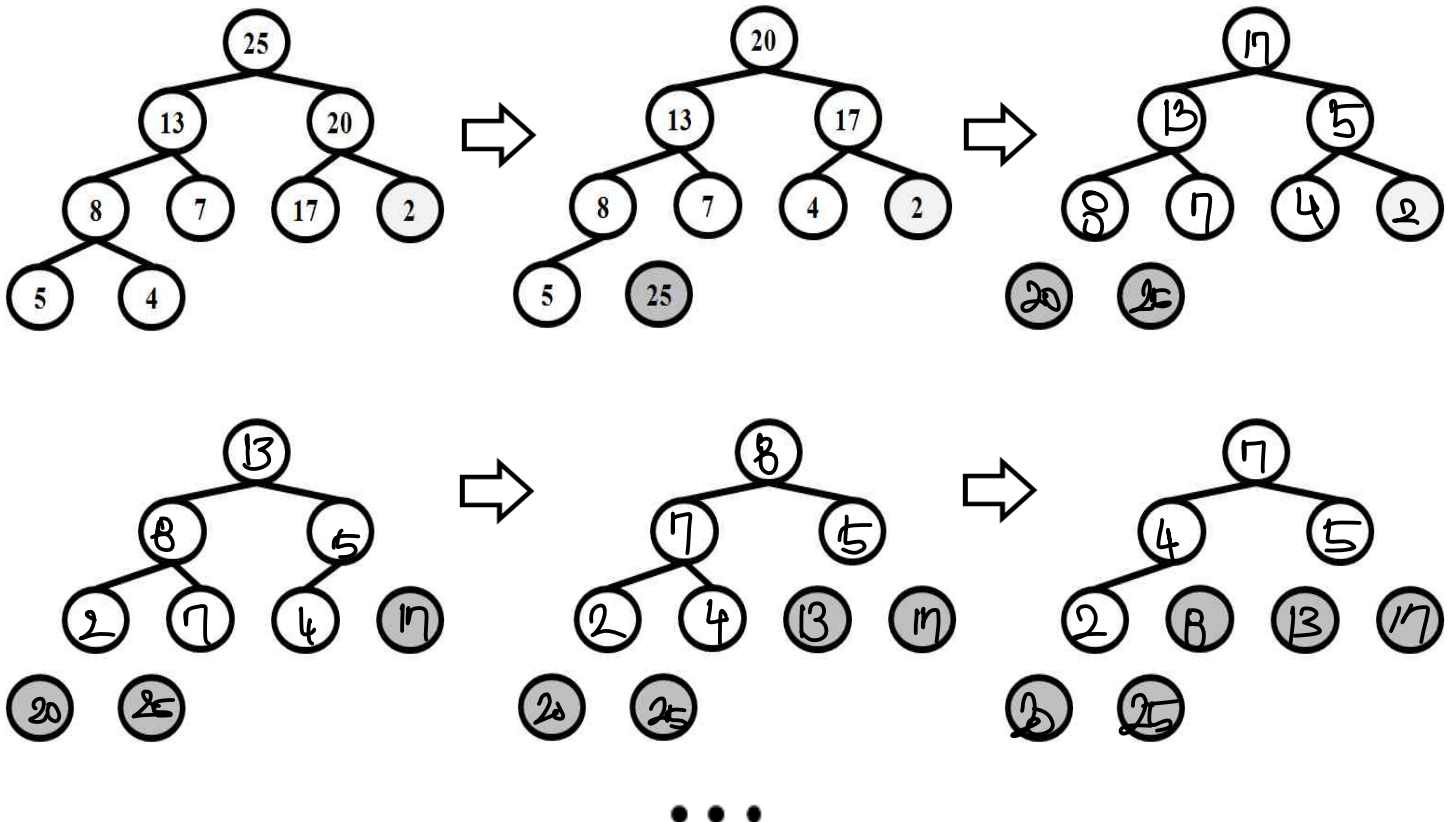
2023065350 陈子航

1. Illustrate the operation of HEAPSORT on the array $A=\{5,13,2,25,7,17,20,8,4\}$.

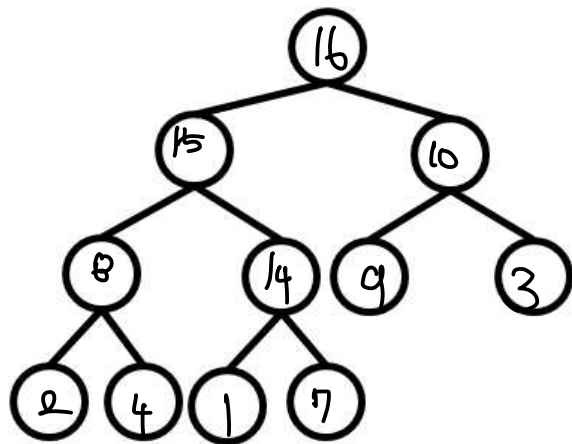
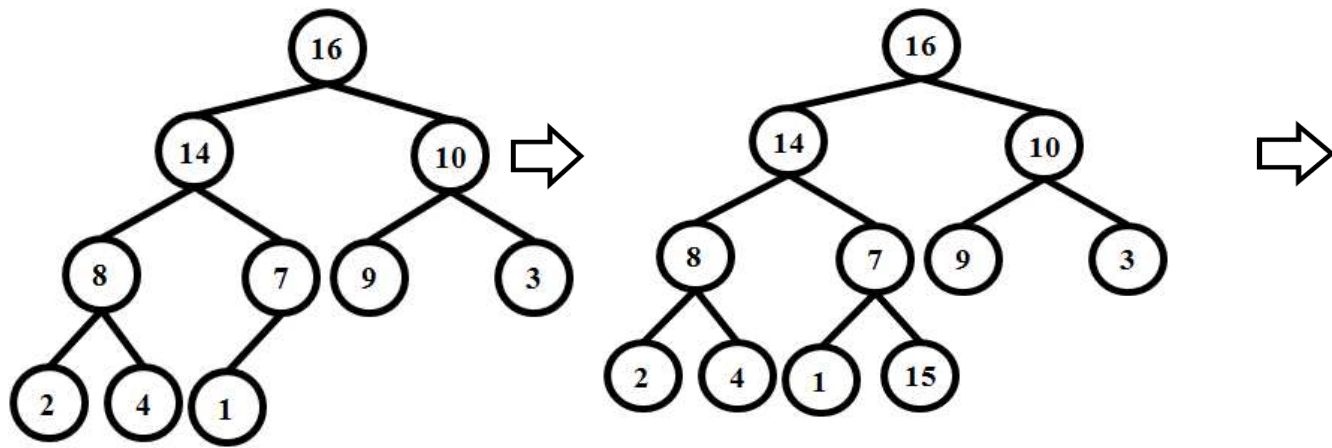
a) BUILD-MAX-HEAP



b) Extract-Max



c) Max-Heap-Insert(A , 15).



2. Fill in the blanks in the following pseudocode for Heapsort.

HEAPSORT(A)

1. BUILD-MAX-HEAP(A)
2. **for** $i = A.length$ **downto**
3. exchange $A[1]$ with - 4. $A.heap-size =$
- 5. MAX-HEAPIFY($A, 1$)