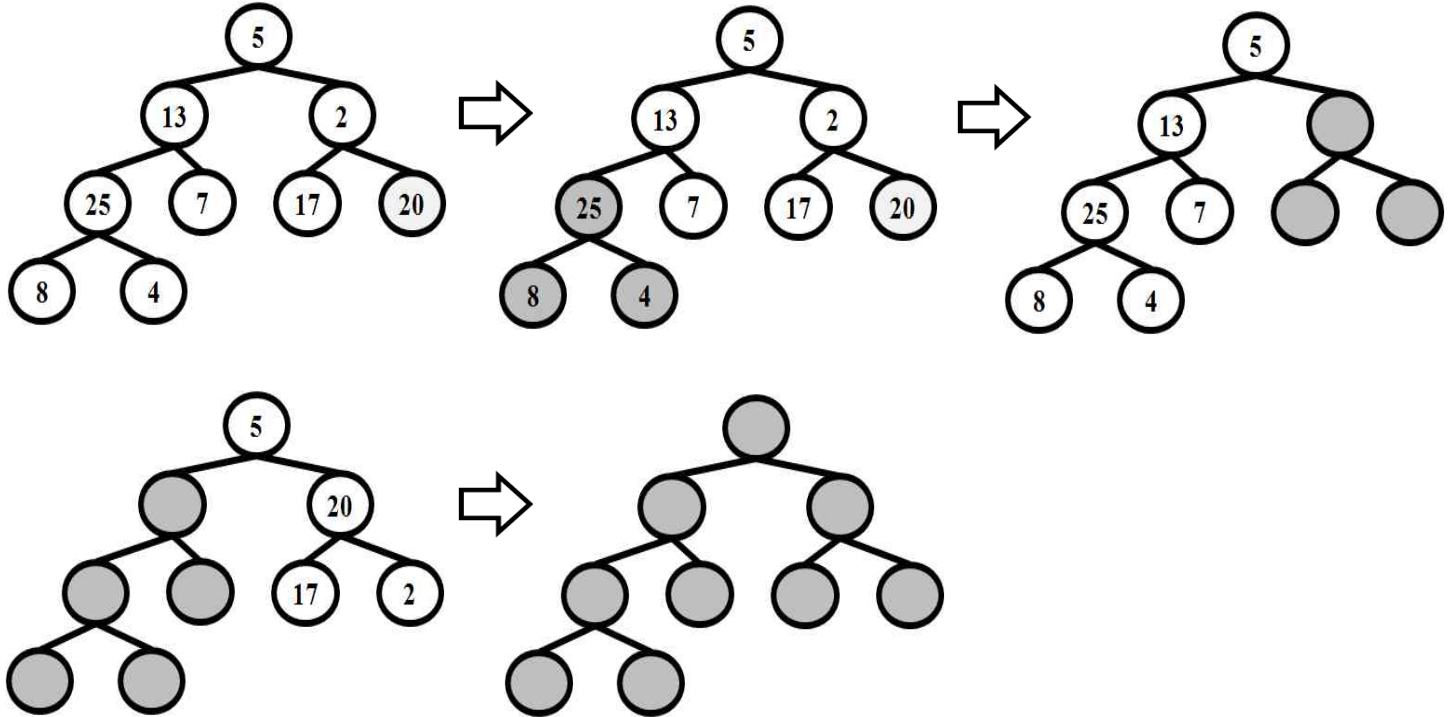


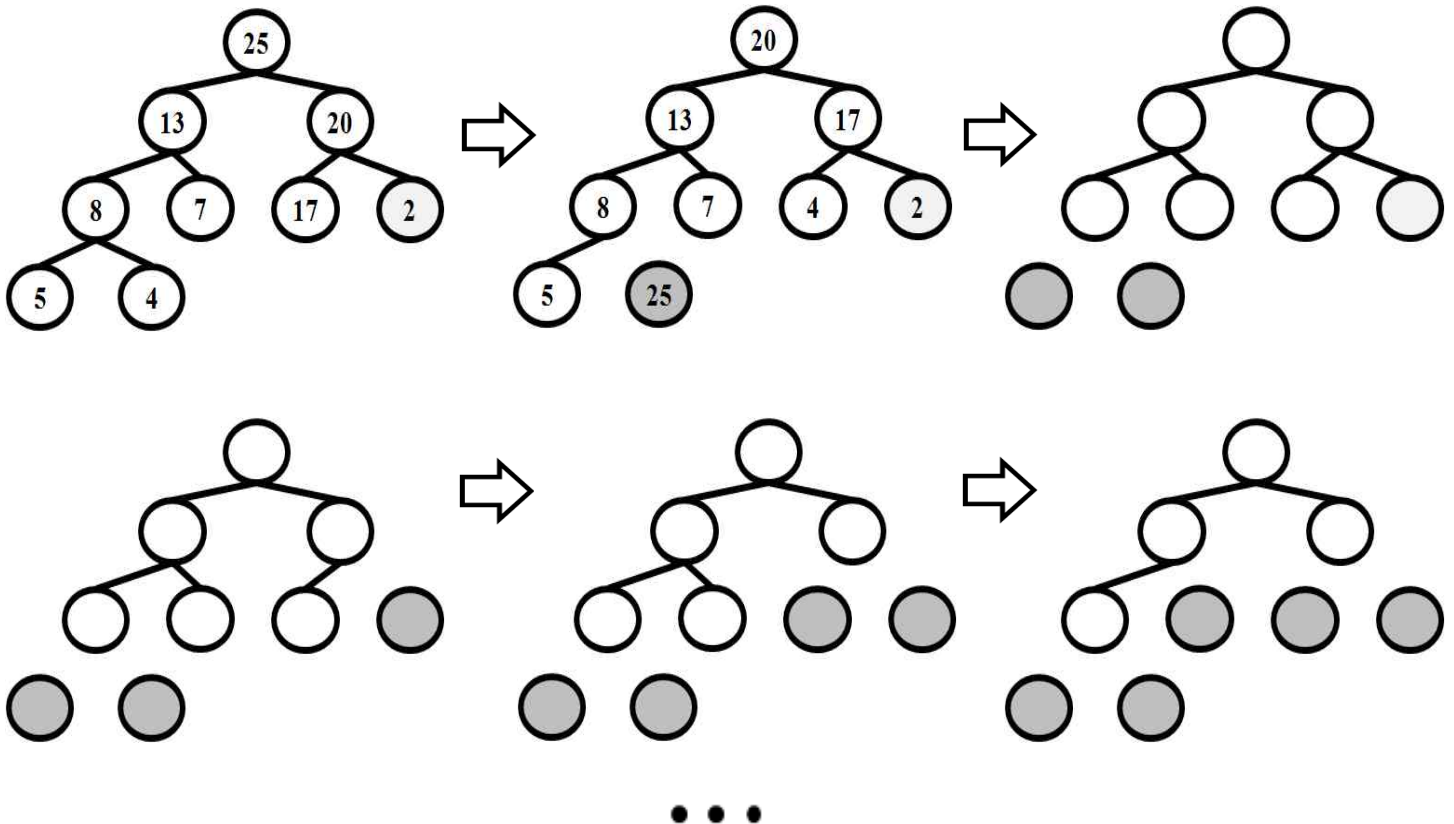
# Review 5

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

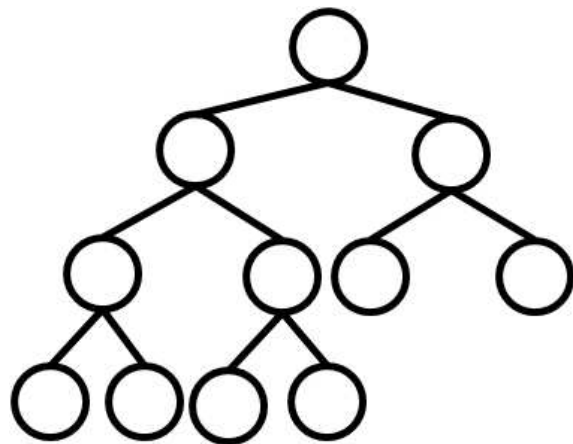
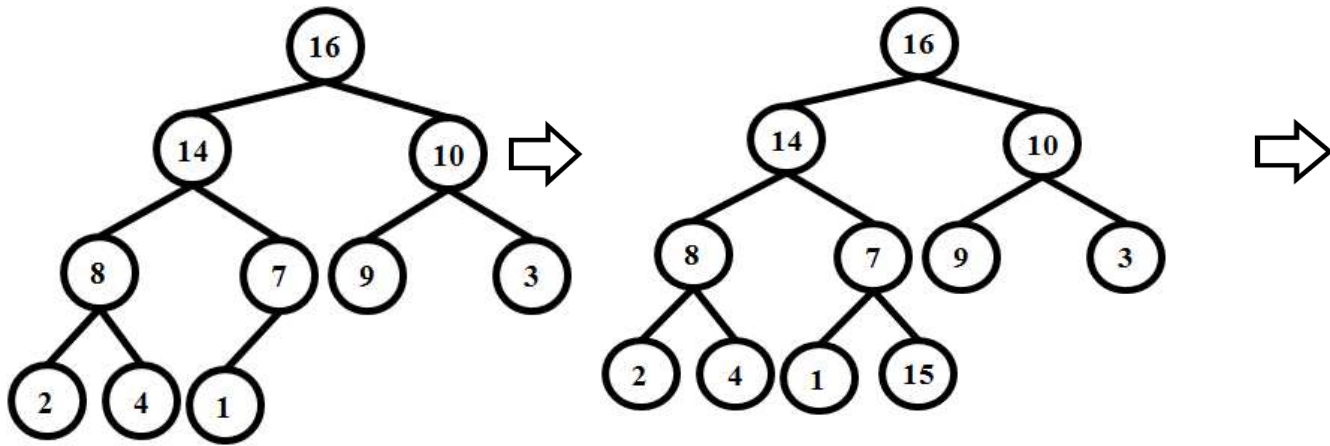
a) BUILD-MAX-HEAP



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)