

6.4-1.

Using Figure 6.4 as a model illustrate the operation of HEAPSORT on the array $A = \langle 5, 13, 2, 25, 7, 17, 20, 8, 4 \rangle$.

Answer.

Figure shows the operation of HEAPSORT on the array $A = \langle 5, 13, 2, 25, 7, 17, 20, 8, 4 \rangle$.

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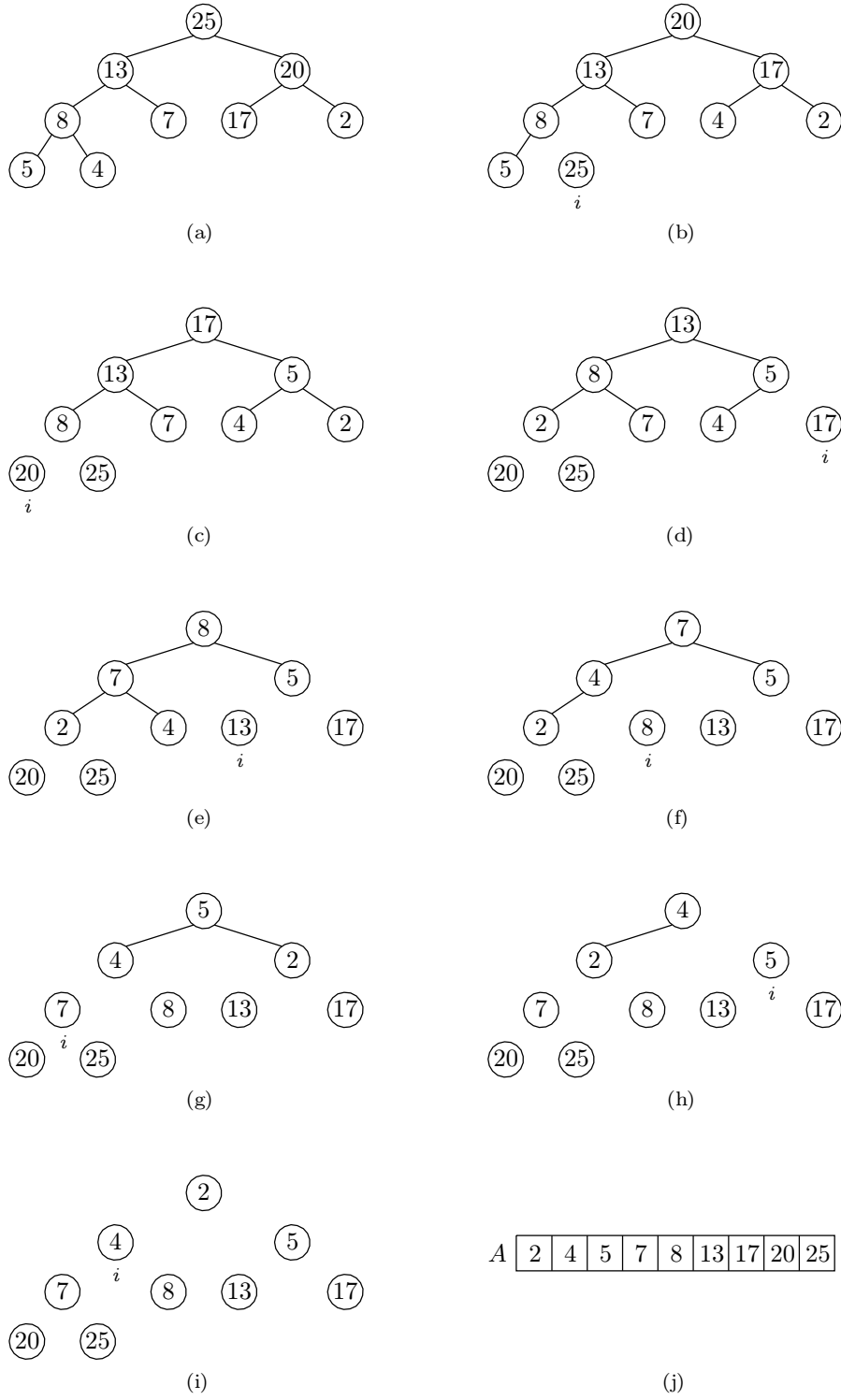


Figure 1. The operation of HEAPSORT. (a) The max-heap data structure just after BUILD-MAX-HEAP has built it in line 1. (b)–(i) The max-heap just after each call of MAX-HEAPIFY in line 5, showing the value of i at that time. (j) The resulting sorted array A .