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 $A = \langle 5, 13, 2, 25, 7, 17, 20, 8, 4 \rangle$.
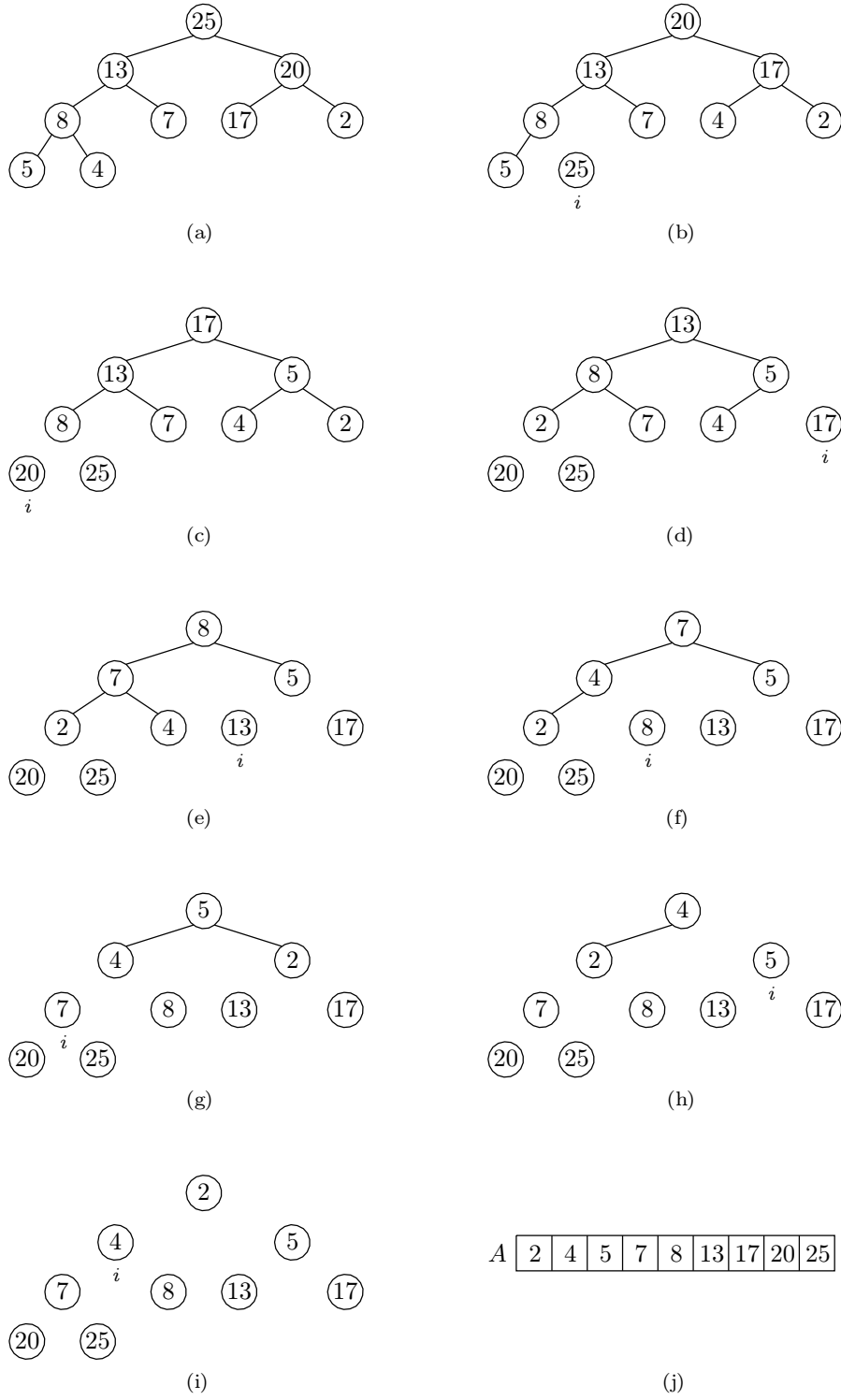
Figure 1. The operation of HEAPSORT. **(a)** The max-heap data structure just after BUILD-MAX-HEAP has built it in line 1. **(b)**−**(i)** The max-heap just after each call of MAX-HEAPIFY in line 5, showing the value of i at that time. **(j)** The resulting sorted array A.