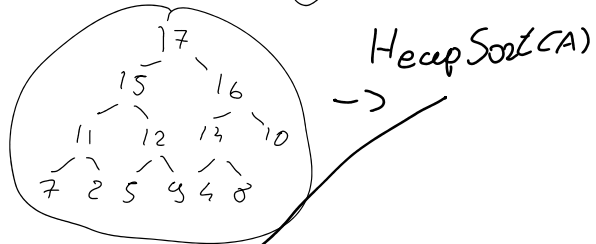
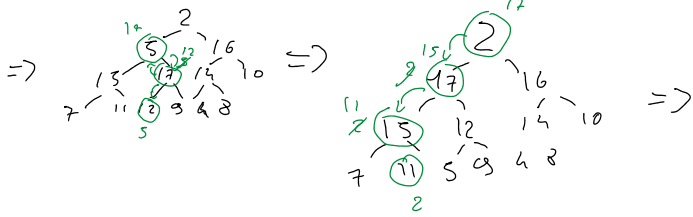
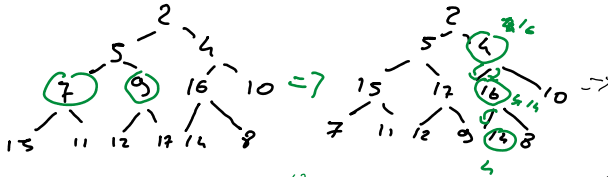
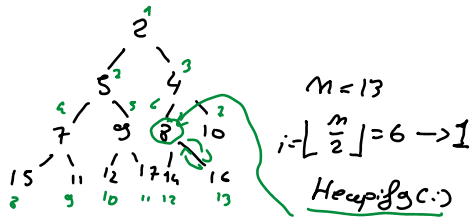
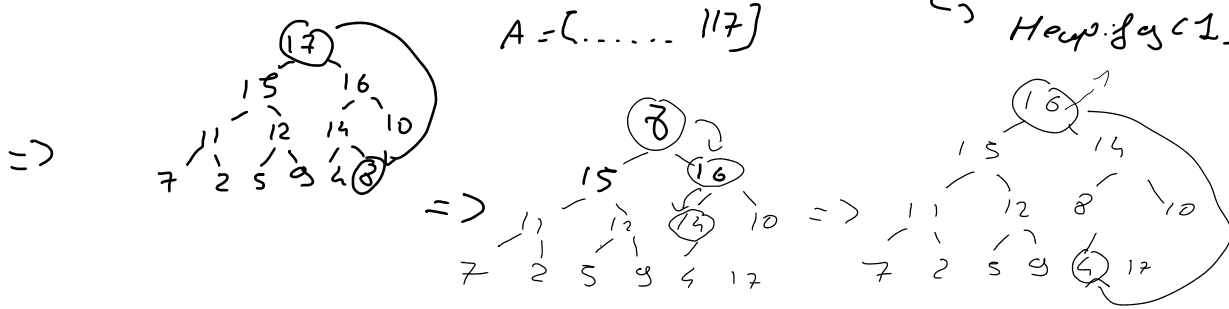


2. Sia $A = \{2, 5, 4, 7, 9, 8, 10, 15, 11, 12, 17, 14, 16\}$ un array di 13 elementi. Si supponga di eseguire l'ordinamento dell'array A mediante l'esecuzione dell'algoritmo **HEAPSORT** al fine di ottenere un ordinamento non decrescente dei suoi elementi. Si fornisca la configurazione dell'array dopo la fase di costruzione dello Heap e dopo ciascuna delle 12 iterazioni dell'algoritmo di ordinamento.

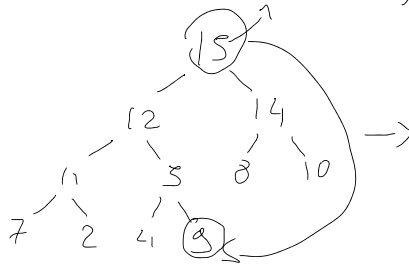
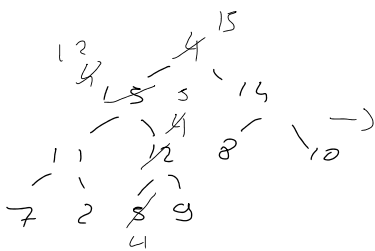
$$A = [2, 5, 4, 7, 9, 8, 10, 15, 11, 12, 17, 14, 16]$$



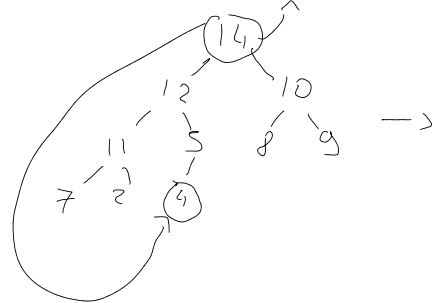
Extract-Max
Heapify(1)



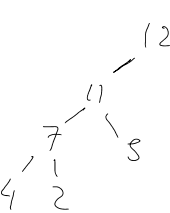
$$\Rightarrow A = [\dots, 16, 17]$$



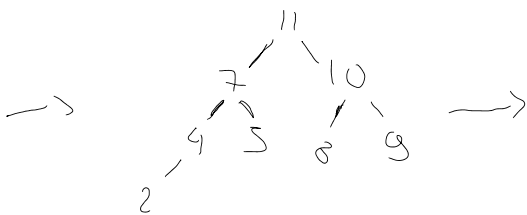
$$A = [\dots, 15, 16, 17]$$



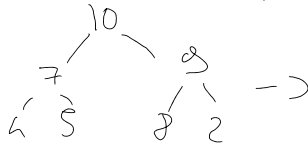
$$A = [\dots, 15, 16, 17]$$



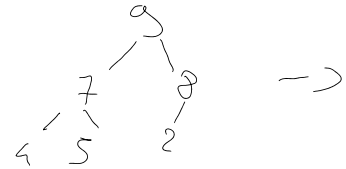
$$A = [\dots, 12, 13, 14, 15, 16, 17]$$



$$A = [\dots, 11, \dots, 17]$$



$$A = [\dots, 10, \dots, 17]$$



$$A = [\dots, 9, \dots, 17]$$



$$A = [\dots, 8, \dots, 17]$$

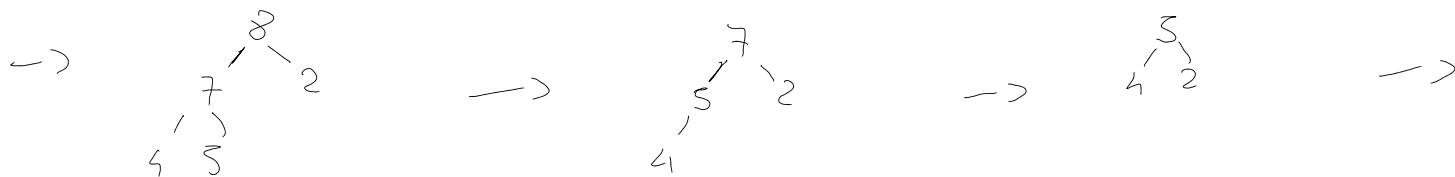


$$A = [\dots, 7, \dots, 17]$$



... | 14, 15, 16 17 }





\rightarrow
 $A = [\dots 15 \dots 17]$
 $\rightarrow A = [2 \ 4 \ 5 \ 7 \ 8 \dots 17]$

