MAX-HEAPIFY(A, i, n)

   $l =$ LEFT(i)
   $r =$ RIGHT(i)
   if $l \leq n$ and $A[l] > A[i]$
      $largest = l$
   else $largest = i$
   if $r \leq n$ and $A[r] > A[largest]$
      $largest = r$
   if $largest \neq i$
      exchange $A[i]$ with $A[largest]$
      MAX-HEAPIFY($A, largest, n$)