Exercise sheet 6

Exercise 12:

   a) Where in a max-heap might the smallest element reside, assuming that
      all elements are distinct ?

   b) Consider an array sorted in descending order. Is this a min-heap or a
      max-heap? Prove your claim!

Exercise 13:

  Illustrate the operation of procedure *Build-Max-Heap* on the array
$A = \langle 5,3,17,10,84,19,6,22,9 \rangle$.

Exercise 15:

How many elements has a queue Q, which is stored in an array of length n
and where *head(Q) = p* and *tail(Q) = q* ?
Write pseudocode for a function *NumElemQ(Q)*, which returns the number of
elements.