**Exercise 6.2**

**2. Show that each child of the root of an -node heap is the root of a subtree containing at most nodes. What is the smallest constant such that each subtree has at most nodes? How does that affect the recurrence (6.1) and its solution?**

**Ans)**

**3. S** **tarting with the procedure MAX-HEAPIFY, write pseudocode for the procedure MIN-HEAPIFY(*A*,*i*), which performs the corresponding manipulation on a min-heap. How does the running time of MIN-HEAPIFY compare to that of MAX-HEAPIFY?**

**Ans)**

MIN-HEAPIFY(A,i):

left = LEFT(i)

right = RIGHT(i)

smallest = i

if left < A.heapsize && A[left] < smallest:

smallest = left

if right < A.heap-size && A[right] < smallest:

smallest = right

if smallest == i:

break

else

exchange A[i] , A[smallest]

i = smallest

MIN-HEAPIFY(A,i)