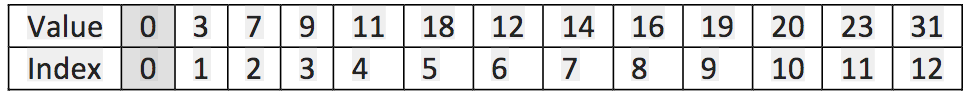
CSC 212 -Data Structures

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Heaps in-class exercises

Consider the minimum heap represented by the following list representation:



1. Draw the heap. What’s its height?
2. Trace through the algorithm for deleting the minimum value from the heap (heap reduction). Show all the steps required to readjust the heap so that it regains the heap property. How many swaps were required?
3. Starting with the resulting heap, trace through the algorithm for adding the value 2 to the heap. As before show all the steps required to readjust the heap. How many swaps were required?
4. What’s the maximum number of swaps required to insert an element into a heap with n elements? Explain.