Theory 4

Mengxi Li

Ml3577

1.

2. Insert: O(n). Assuming that

findmin: O (1). Because in a sorted array, it always costs a constant time to find min.

3. Three pointers: the first and second pointers swap from front to back, the third point swap from back to front. If the pointer 3 encounters a red

6. Since a Hubble sort keeps alternating its scanning direction, it performs better when an array is almost sorted except a few elements. Besides, Hubble sort avoids swapping elements which have been already swapped, so that the overall running time is reduced.

7. It’s true.

8. Three-way partition:

Dual pivot:

9.