

# INF 4130 Exercise set 7

## Exercise 1

Solve exercise 6.19 in Mark Allen Weiss *Algorithms and Datastructures in Java* (the INF 2220 book).

## Exercise 2

Solve exercise 6.25 in MAW.

## Exercise 3

Solve exercise 6.30 in MAW.

## Exercise 4

Write a non-recursive implementation of `merge()` for leftist heaps.

## Exercise 5

Professor Pinocchio claims that the height of an  $N$ -node Fibonacci heap is  $O(\log N)$ . Prove the professor wrong by showing that for every positive integer  $N$ , there is a sequence of Fibonacci heap operations constructing a heap that is one long chain of  $N$  nodes.

(Some applets exists on the internet that visualize Fibonacci heaps, most require javascript.)

## Exercise 6

Discuss the notions of average and amortized time briefly.

[end]