Hayes Crowley, Exercise 4

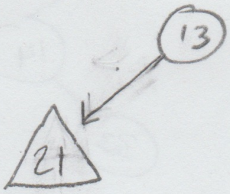
☆ Heaps ☆

Task: From left to right, insert each item in the given input (in4.txt) into a heap data structure. Re-draw the heap tree after each insert, being sure to maintain min-heap order property. △ = Change at Position and/or Level.

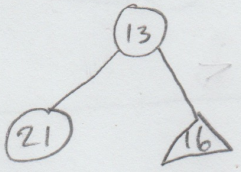
Input: [13, 21, 16, 24, 31, 33, 14, 19, 68, 65, 26, 32]

1 | 13

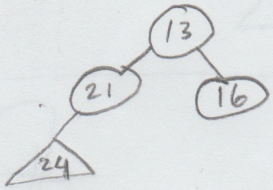
2 | 21



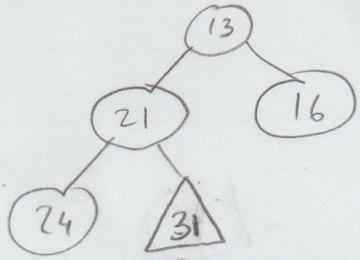
3 | 16



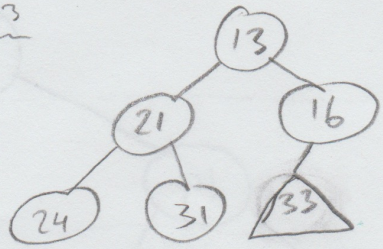
4 | 24



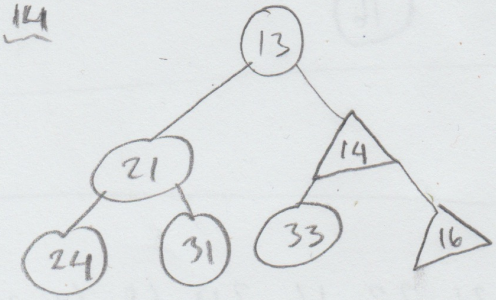
5 | 31



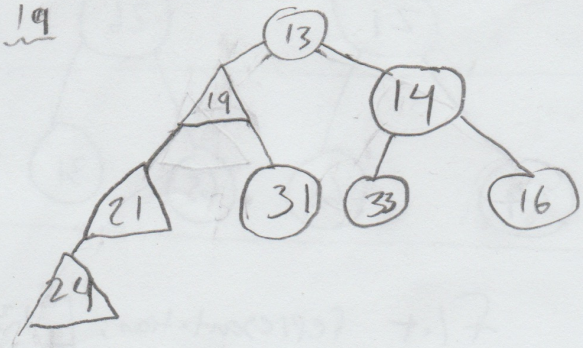
6 | 33



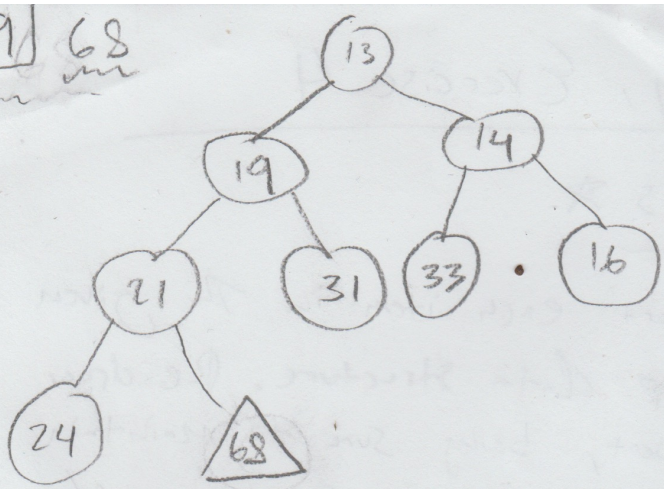
7 | 14



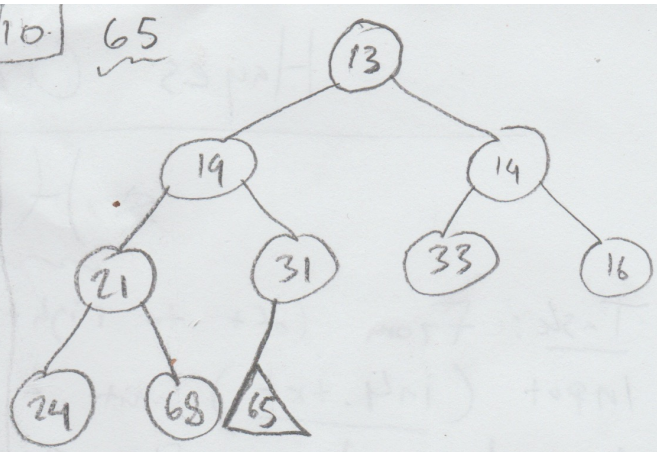
8 | 19



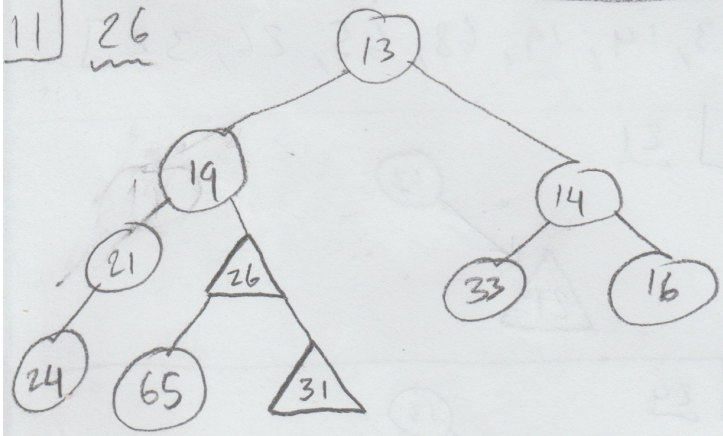
9) 68



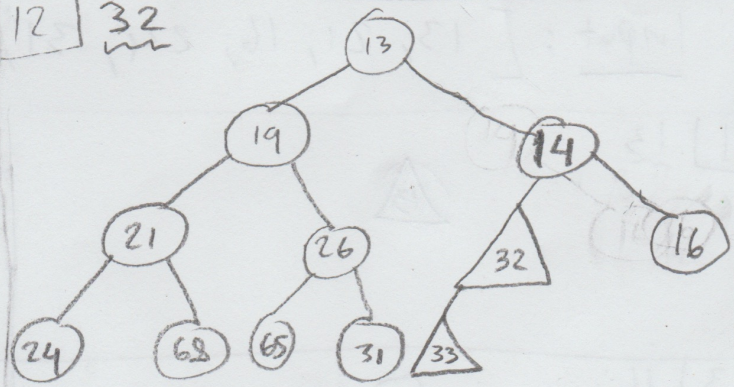
10. 65



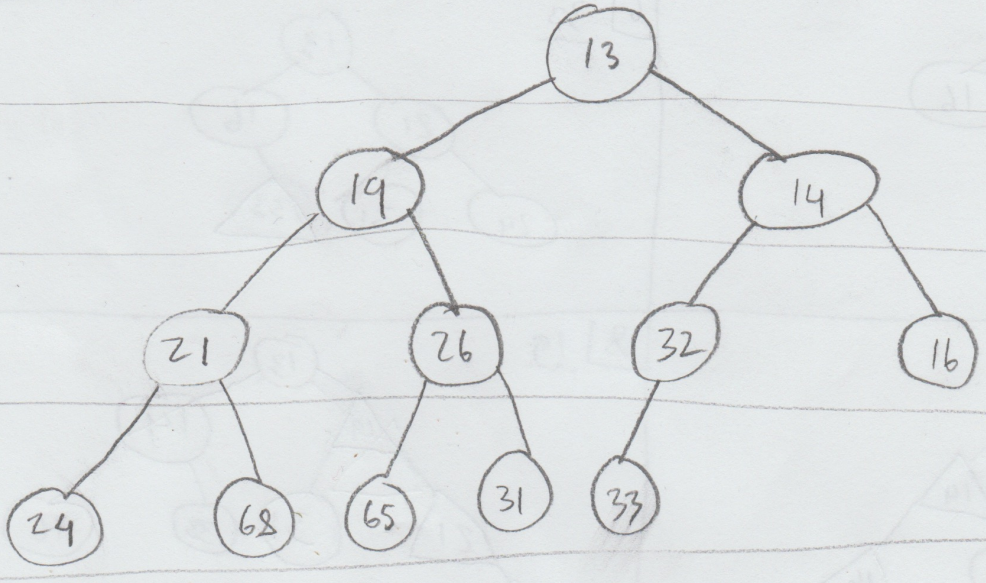
11) 26



12) 32



final Heap



flat representation: [13, 19, 14, 21, 26, 32, 16, 24, 68, 65, 31, 33]