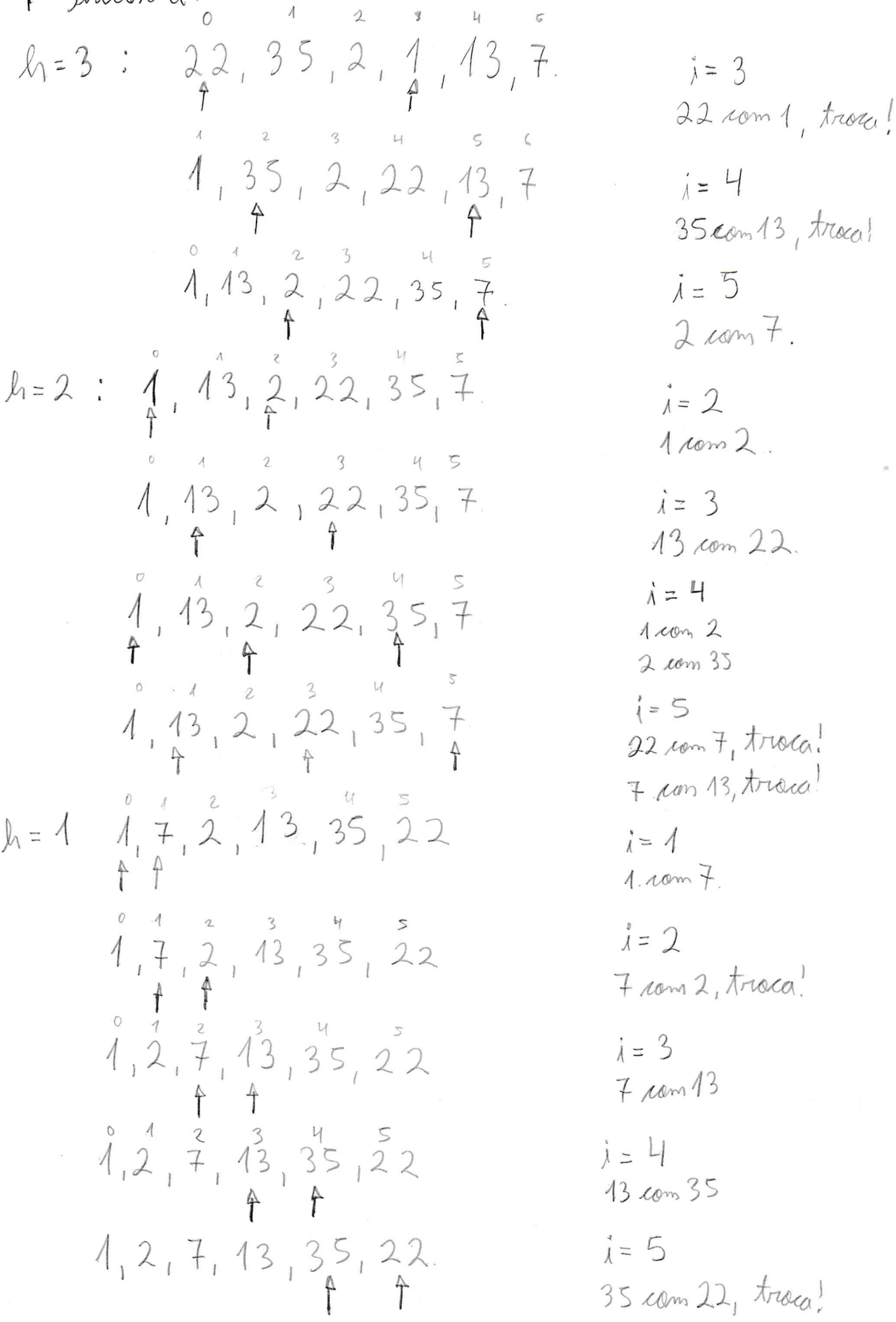
Lista 3 - AED 2 -

Davi Juliano F. Alves - 133595.

1- Shellsort:



Ordenado: 1, 2, 7, 13, 22, 35

→ Quicksort:

Particiona (V, 0, 5)

esq, dir

22, 35, 2, 1, 13, 7 — esq ≤ pivô, esq++

22, 35, 2, 1, 13, 7 — esq > pivô, comp com dir

dir < pivô, esq ⇄ dir

22, 7, 2, 1, 13, 35 — esq < dir, continua o while.

22, 7, 2, 1, 13, 35 — esq ≤ pivô, esq++

22, 7, 2, 1, 13, 35 — esq ≤ pivô, esq++

22, 7, 2, 1, 13, 35 — esq ≤ pivô, esq++

22, 7, 2, 1, 13, 35 — esq ≤ pivô, esq++

22, 7, 2, 1, 13, 35 — esq > pivô, comp com dir

dir > pivô, dir--

22, 7, 2, 1, 13, 35 — pivo > dir e dir > esq.

troca dir e pivô

13, 7, 2, 1, 22, 35 — dir é o novo pivô

Particiona (V, 0, 3) | 13, 7, 2, 1 | 22 | 35 | Particiona (V, 5, 5)

Analisaremos esse!

Particiono (V, 0, 3)

esq, dir
13, 7, 2, 1 — esq ≤ pivo, esq++

13, 7, 2, 1 — esq ≤ pivo, esq++

13, 7, 2, 1 — esq ≤ pivo, esq++

13, 7, 2, 1 — dir < pivô, troco dir ⇄ pivô. dir é o pivô.

1, 7, 2, 13

1, 7, 2 | 13 | 22 | 35 → Vetor.

Particiono (V, 0, 2) — Analisamos se particiono.

Particiono: (V, 0, 2)

esq, dir
1, 7, 2 — esq ≤ pivo, esq++

1, 7, 2 — esq > pivo, comp dir. pivo < dir, dir--

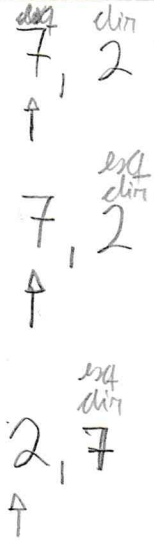
1, 7, 2 — dir > pivo, dir--

1, 7, 2 — dir é o novo pivô.

1 | 7, 2 | 13 | 22 | 35 → Vetor

Particiono (V, 1, 2)

Particiona: (V, 1, 2)



esq ≤ pivô, esq ++

esq ≥ final, comp dir

pivo > dir, troco esq ⇄ dir.

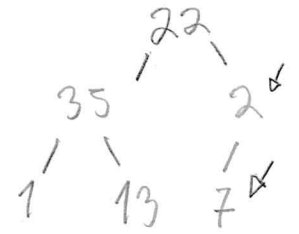
troco dir ⇄ pivô

dir é o novo pivo.

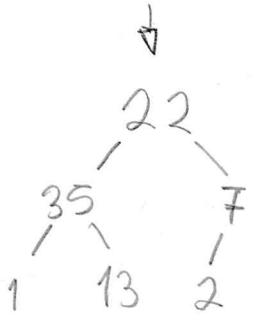
1 | 2 | 7 | 13 | 22 | 35 → Vetor ordenado.

→ Heapsort: 22, 35, 2, 1, 13, 7

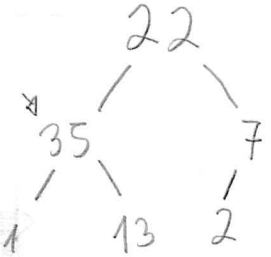
Cria Heap (V, 2, 5):



aux = 2



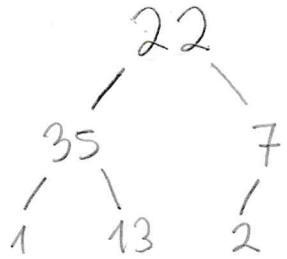
Cria Heap (V, 1, 5):



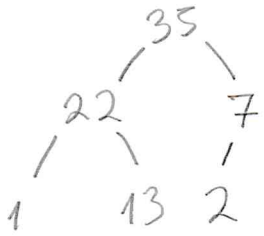
aux: 35

Nenhum filho é maior, analise no Cria Heap (V, 0, 5)

Criar Heap (V, 0, 5):

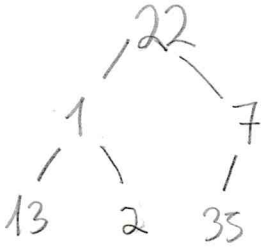


aux = 22.

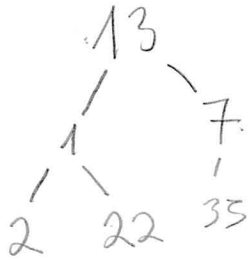


Aplicar no Heap Sort:

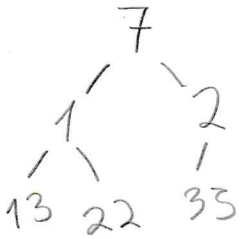
i-1=4:



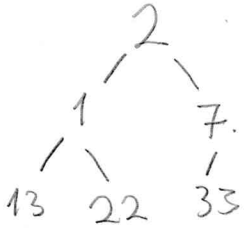
i-1=3:



i-1=2:

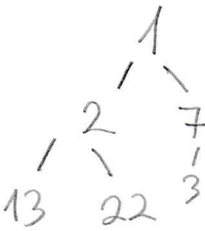


i-1=1:



e

i-1=0:



, ou seja:

1, 2, 7, 13, 22, 35 → Vetor ordenado.