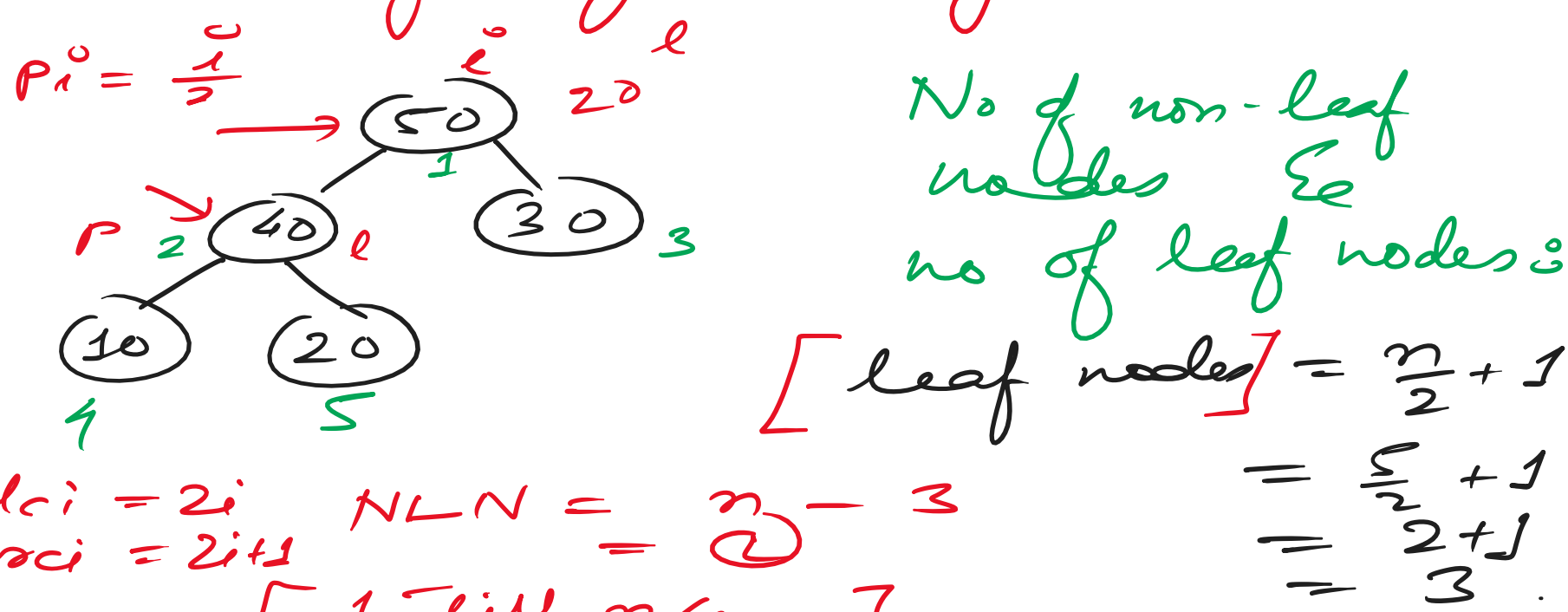


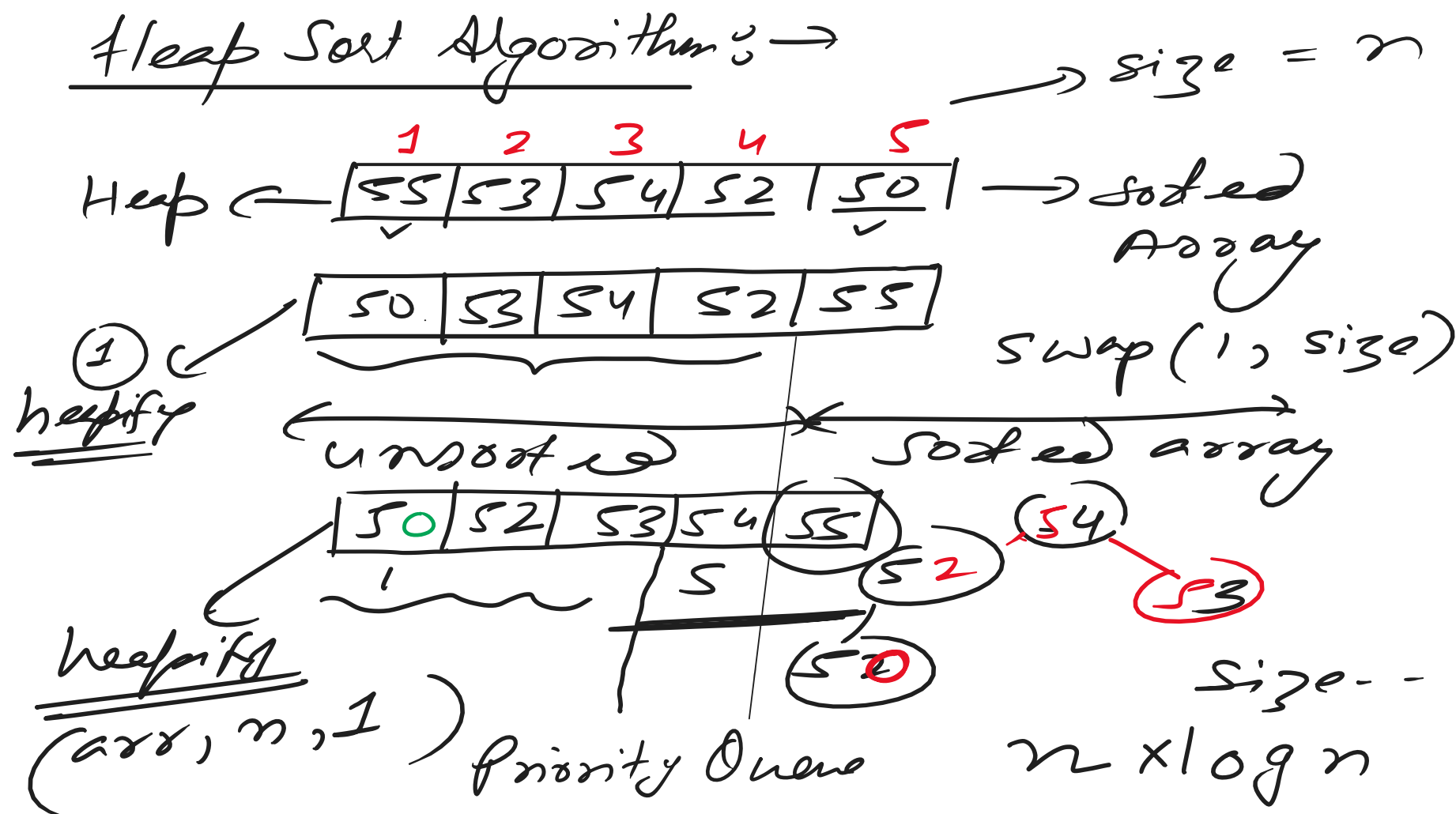
The Heapify Algorithm :

Converting a given array into a heap.



$arr \rightarrow -1, 54, 53, 55, 52, 50$
 $5, 5$
 $53, 54$
 $52, 50$
 $\rightarrow \begin{matrix} |55|53|54|52|50| \\ |1|2|3|4|5| \end{matrix}$

Heap Sort Algorithm →



k largest elements in an array :

{ 19, 21, 4, 9, 3, 7 }

k = 3 , 3 largest elements

minHeap → 3, 4, 7, (9, 19, 21)

O(1)

6 > 3

3, 4, 7

(6)

5 > 3

4 > 3

3 > 3

stop

poll

for

while

h.size > k

* Find the kth smallest element in the array :

arr → 7, 10, 4, 3, 20, 15

int k = 3 (3rd Smallest)

(3, 4, 7, 10, 15, 20)

↓ ↓ ↓ X X X

Max Heap :

7 → peak()

4

3

kth Smallest

* Inner Class Concept :

* Nested Classes :

class A {

class B {

}

}

R, B, G, Y

Bugs

H, L, M

(Enums) → C, C++, Java

Enumeration

Mon, Tue

Jan, Dec

named constants

Java code to display the current date & time & year in the given format :

161, Jun 10 2025

365

java.time

(Case Sensitive)

→ Local Date

→ Local Time

→ Local Date Time ***