

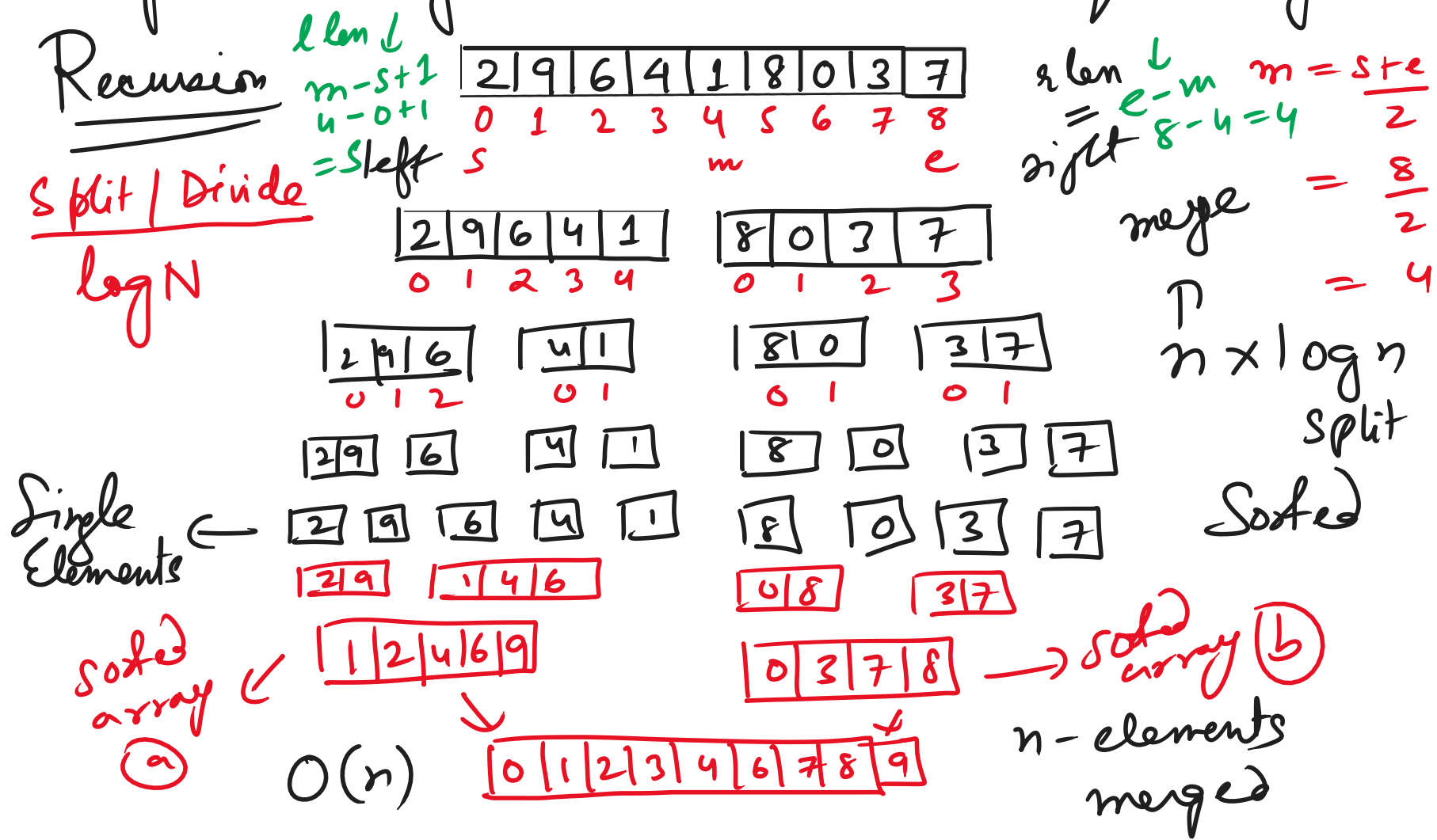
\* Merge two sorted arrays:  $\rightarrow$   
 $\checkmark$  arr1 = {1, 3, 5, 7, 9}  
 $\checkmark$  arr2 = {2, 4, 6}  
 $i=0, j=0, k=0$   
 if (arr1[i] < arr2[j])  
     arr[k++] = arr1[i++];  
 else arr[k++] = arr2[j++];

Two Pointer Approach

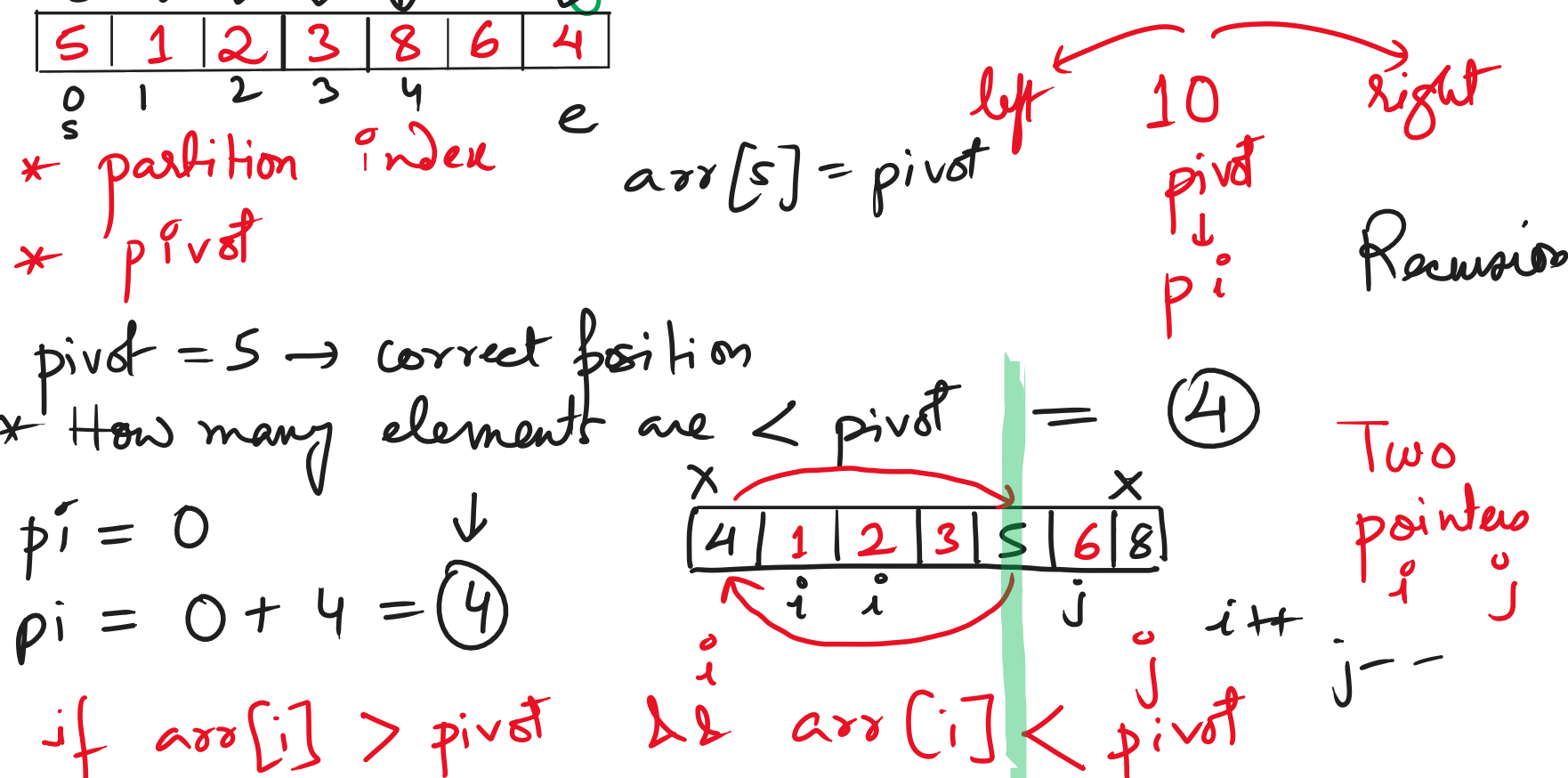
arr3 = {1, 2, 3, 4, 5, 6, 7, 9};

if there are any remaining elements in either array, just copy paste.

Merge Sort Algorithm:  $\rightarrow$  Divide & Conquer Algorithm



The Quick Sort Algorithm:  $\rightarrow$  (In place sorting algo)



\* Josephus Problem? (1823) LeetCode

(6 LPA | 8 LPA | 12 LPA | 22 LPA | 45 LPA)

Winner of the Circular Game

Solve(n, k)  $\rightarrow$  Solve(n-1, k)

Solve(2, k)  $\rightarrow$  Solve(1, k)

Solve(3, k)  $\rightarrow$  Solve(2, k)

Solve(4, k)  $\rightarrow$  Solve(3, k)

Solve(5, k)  $\rightarrow$  Solve(4, k)

Solve(n, k) = [Solve(n-1, k) + k] % n

Cycle: 0, 1, 5, 4, 3, 2

Strings in Java:  $\rightarrow$

A string is defined as an array of characters.  
 A string can contain:

- ✓ (1) Alphabets
- ✓ (2) Numbers
- ✓ (3) Special Characters
- ✓ (4) White spaces

For example:  $\rightarrow$

"biket-davangere"

Uppercase to lowercase  $\rightarrow$  'a' =

Lowercase to uppercase. 'A' =

\* Why are strings called immutable in Java? How can you create mutable strings in Java?

\* Calculate the practical time complexity of mutable strings in Java.

(Cognizant IBM HCL HP Intel) Pascal class

String Builder & String Buffer camel case

rate of interest

Trie

(java.lang)

Rate of interest