MAKING ANAGRAMS

GIVEN: $A = \{ \cdots \}$, $B = \{ \cdots \}$; where Strings A and B do not have to initially have the same length

FIND: The minimum number of character deletions so that the frequency of characters in Strings A and B are matching

CONSTRAINTS: $1 \leq |\text{string length}| \leq 10^4$

$A \in \{a, b, c, \ldots, z\}$, $B \in \{a, b, c, \ldots, z\}$

ascii [a - z] ascii [a - z]

VISUALIZE PROBLEM

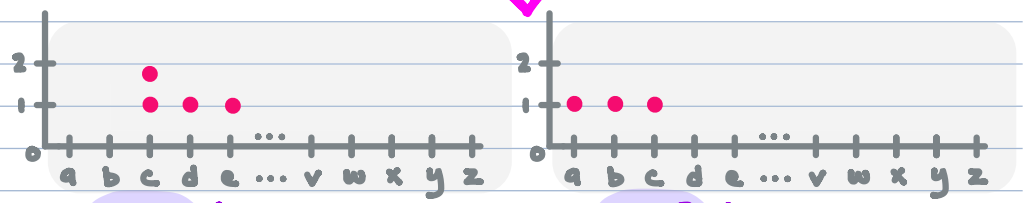
↓

MATHEMATICAL MODEL:

* (FREQUENCY PROBLEM)

Set A = { c, d, e, c }

Set B = { a, b, c }



Set A frequency graph Set B frequency graph

* where Set A and B are in parallel (2 frequency graphs)

DOMAIN OF DISCOURSE :

1D Linear Traversal (of a Set — "universe") of $\forall \in$ Set

EVENT BEING FOUND :

Finding a Vectors initial Starting index and incrementation through the Vector

EVENT HANDLER :

Count the frequency of the char and Store it in a graph (a Vector of Size 26 — for 26 letters in the alphabet)

ALGORITHM: MAthematical Model Explanation

- First, create 2 empty frequency graphs (vectors) for Set A and B of size 26.

- Increment through Set A and store the frequency of each character into its frequency graph.

- Increment through Set B and store the frequency of each character into its frequency graph.

- Increment through both frequency graphs, "deleting" the excessive character counts for each character and accounting for each "deletion"

- Once you're done traversing return the count of the number of "deletions" found