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HydratedHakafos non-programming write-up

Double Ratio Estimate: 2.0

My Algorithm is $O(n)$ because it only traverses through the length the array once

Pseudocode:

ErrorChecker to check if sizes aren't same or arrays are null or empty

Make return variable = 1 since tables start at 1 and go to n

For loop that runs through the size of one of the arrays(since both are same size)

 adds the difference of the waterAvailable[i] and waterNeeded[i] to a sum variable

 if the difference is less than zero

 make the sum equal to zero

 make the return value equal to the index + 2(since the tables are 1-n not 0-n-1)

 add waterAvailable[I] to available variable

 add waterNeeded[I] to needed variable

if(the available water - needed water is less than 0)

 return -1 because that means no solution is possible

Otherwise return the index

This code only runs through the array once and is therefore $O(n)$ and all other look ups are constant.