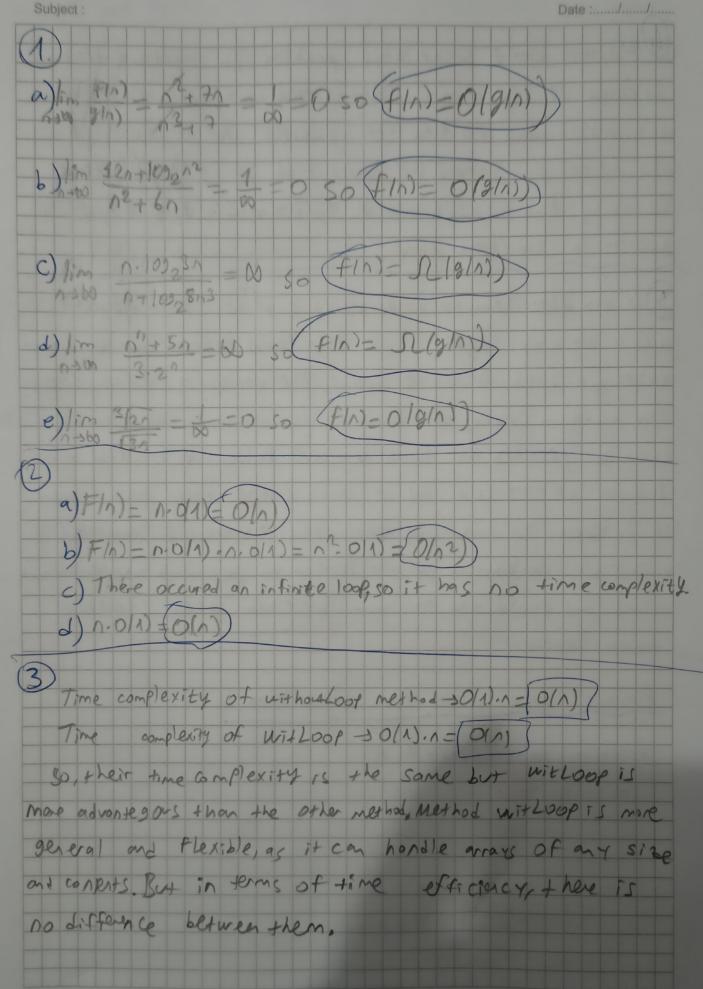
CSE222 HW2 200104004019 RESIT Aydin



(4) No, we can't solve this problem in constant time, be cause if the array is not sorted , we have to iterate over whole army to find the specific integer, even if the array is sorted, we could find it in log(n) time by using Binary-search method, so we conte find + his problem in constant time 5) In my algorithmy to avoid using quadratic time algorithms, Which are very inefficient, I first found minimum and maximum values of both A and B aways, The reason I found not only minimum values of them but also maximum of them is occause if they are both regative values, if we find the Product of them, we end up with finding their max value of product. To sum up, with this algorithm, I compared 4 possible combination of the product of minimum and maximum values and found the minimum of them they returned that ralle code of the algorithm: Pseudo foretion minfroduct (A, B): min1=10000 min2=10000 MUX 1 = -10000 max 2 - 10000 for i in range (len(A)): if (ACIZKMINA) min1 = ACIT IFI ACIS MAXI MAXI = ACI]

Date :...../...../ Subject: in range (len(B)): if (BLIJEMINZ) minz = BCI] FF/ BC- 3 Max2 max2 = BC=7 if (min1. min 2 < max 1. max 2 and min1 min 2 < min1. max 2 min 1-min 2 < max 1-min 2) return mint mint elif (max 1. max 2 4 min1. min 2 and max 1 max 2 4 min1-max 2 and Max1. Max2 Kmax1. min2) return Max1. Max2 elifoning max2 & mint min2 and mint max2 & max g max 2 and Min1 max2 < max1-min2) return min1 max2 return maximinz Time complexity of the algorithm at the worst case: F(nm) = 0(n+m)

-3