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**Assignment 1**

**Algorithms**

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| --- | --- | --- |
| Name | ID | Group |
| Toqa Ahmed | **2020612** | **6** |
| Mariam Abdelazaim | **20206150** | **6** |
| Maryam Khamis | **20206160** | **6** |
| Nada Osama | **20216108** | **6** |

**Problem 1:**

**Problem 2:**







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And so on . . . . . .

**Solve it with Iteration method:**

**Problem 3:**

f(n)=

a=2k b =2k d=0

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**Problem 4:**

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**Problem 6:**

Divide:

-compute the median of array

-splite into two arrays (

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Conqure:

-calculate the closest pair of each athor of array

Combine:

-find the final result(smallest distence between two points)

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First of all we will sort the array

Then divide the array into two parts (and find the middle p[ first array will be from p[0] to p[ and second array from p[ to p[n-1]

2- in each subarray find the smallest distense between two points using the rule we will called it and find the min between them called (d)

3-there is case if point of and point of can be min than d so we will assume  vertical line passing through the middle of array and calculate every distence between point and the vertical line and put it in thirs array we will called it sprit .

4-sort the array and compare with the d if it smallest or not.