

Exercise 2

Describe a $n\log(n)$ time algorithm that, given a set S of n integers and another integer x , determines whether or not there exist two elements in S whose sum is exactly x .

EX-1:

Giving **array = [2,3,4,8,20,13,17]** and **x = 15**

Answer should be: **2,13** as $2 + 13 = 15$

EX-2:

Giving **array = [2,3,4,8,20,13,17]** and **x = 30**

Answer should be: **Not Exist** as we don't have any two numbers which their sum equal to 30

EX-3:

Giving **array = [0,2,3,4,8,20,13,17]** and **x = 20**

Answer should be: **0,20** or **3,17** as $0 + 20 = 20$ & $3 + 17 = 20$