1. Write an algorithm that accepts and stores the marks of ten students in an array, it then calculates and outputs the: lowest, highest, and average marks of the students, it should use three functions; input, compute and output.

Double[] ar;

Double sum;

Double average;

Read height;

for (i = 0; i < 10; i++) {

ar[i]= height;

   }

void Sorting(double[] ar){

for (int i = 0; i ‹ ar.length-1; i++)

{

int min = i;

for (int j = i+1; j ‹ ar.length; j++)

if (ar[j] ‹ ar[min]) min = j;

int temp = ar[i];

ar[i] = ar[min];

ar[min] = temp;

sum=sum+ar[i];

} }

hinheight=ar[0];

maxheght=ar[9];

average=sum/10

1. 2. Briefly discuss FOUR properties of an algorithm.

**Precision** – the steps are precisely stated (defined).

**Uniqueness** – results of each step are uniquely defined and only depend on the input and the result of the preceding steps.

**Finiteness** – the algorithm stops after a finite number of instructions are executed.

**Input** – the algorithm receives input.

**Output** – the algorithm produces output.

3. Swap (P , Q)

**Start**

1. a=a+b;

2. b=a-b;

3. a=a-b;

4. print a and b

**End**