**Write an algorithm and draw flowchart for following problems.**

**1). To check whether a given number is prime or not.**

**Algorithm 1 :**

**STEP 1**: Ask the user to enter the number.

**STEP 2**: Read a Number as n.

**STEP 3**: If the number is 1 than print out “1 is not prime & is not composite Number.”

**STEP 4**: Divide the number with 2 to n-1.

**STEP 5**: If the number is divisible by any value in 2 to n-1, then go to STEP: 7.

**STEP 6**: Else go to STEP: 8.

**STEP 7**: print out “Your number is prime number”.

**STEP 8**: print out “Your number is not prime number”.

**STEP 9**: And the program.

**Flowchart 1 :**

Start

No

Yes

Yes

No

Yes

No

n%i==0

Display n is prime

count==2

I=i+1

count=count+1

END

Display not prime

I<=n

Set i=1, count=0

Read n

**2). To find G.C.D of two numbers.**

**Algorithm 2 :**

**STEP 1**: Ask the user to enter positive two different integer number x & y.

**STEP 2**: Read a number as x and y.

**STEP 3**: Set i=1. Using for loop iterated until i is less than equal to x & y.

**STEP 4**: If x & y both are exactly divisible by i, the value of i is assigned to GCD.

**STEP 5**: Display the value of variable GCD.

**STEP 6**: Exit the program.

**Flowchart 2 :**

Start

No

No

Yes

Yes

END

i<=x && i<=y

Set i=1

i=i+1

I=gcd

x%i==0 && y%i==0

Display the value of gcd

Read x and y

**3). To find a largest digit from given number.(i.e 4 is largest in 1432)**

**Algorithm 3 :**

**STEP 1**: Ask the user to enter the number.

**STEP 2**: Read a Number as n.

**STEP 3**: Set l=0.

**STEP 4**: Check the number is divisible by 10 and assume the reminder as r.

**STEP 5**: If r>l then assumes r=l.

**STEP 6**: Now calculate n=n/10.

**STEP 7**: If n is not equal to zero (n! =0) than go to STEP: 4. Else go to STEP: 8.

**STEP 8**: Print out “A largest digit in this number is l”.

**STEP 9**: And the program.

**Flowchart 3 :**

Start

END

Display the value of L

L=r

r=n%10

r>L

n=n/10

n!=0

Set L=0

Read n

Declare n and r

No

Yes

Yes

No

**4). To reverse a given set of numbers.**

**Algorithm 4 :**

**STEP 1**: Ask the user to enter the number.

**STEP 2**: Read a Number as n.

**STEP 3**: Set Rev=0.

**STEP 4**: Check the n is divisible by 10 and assume the reminder as r.

**STEP 5**: Find out Rev= (Rev\*10).

**STEP 6**: Calculate n=n/10.

**STEP 7**: If n>0 than go to STEP: 4.Else go to STEP: 8.

**STEP 8**: Print out “The reverse number is Rev”.

**STEP 9**: Exit the program.

**Flowchart 4 :**

Start

END

Display the value of R

R=(R\*10)+r

n=n/10

n!=0

Set R=0

Read n

Declare n and r

No

Yes

r=n%10