Instructions: What is/are error in the following algorithms, write step number and error in your answer? You can add a step if required.

1. **Find error in the following algorithm to find area of a circle**

START

1. R=0

2. Input area (A) and radius (R)

3. A =3.14 x R X R

4. WRITE “Area of circleis =”, a

STOP

1. **Find error in the following algorithm of swapping of two numbers**

START

1. A=12 B=34 T=0
2. READ A and B
3. WRITE “Values of A and B before swapping =”, A, B
4. T=A
5. A=T
6. B=A
7. WRITE “Values of A and B after swapping =”, B, A

STOP

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1. **Find error in the following algorithm of finding roots of a quadratic equation**

Step 1: Start

Step 2: a=0, b=0, c=0, D=0, x1=0, x2=0, rp and ip

Step 3: Calculate discriminant

D = b**3**- 4 x a x b x c

Step 3: If (D >= 0)

r1 = (-b+√D)/2 x a

r2 = (-b-√D)/2 x a

Read r1 and r2 as roots.

Then

Calculate real part and imaginary part

Rp = -b/2 x a

ip = √(-D)/2 x a

Display rp + j (ip) and rp - j(ip) as roots

Step 4: Start

1. **Find errors in following paragraph**

In programming, algorithm is a set of well defined instructions in a sequence to solve the problem and qualities of a good algorithm:

* Input and output should be defined precisely.
* Each steps in algorithm should be very descriptive, clear and ambiguous.
* Algorithm should be most effective among many different ways to solve a problem.
* It is necessary that an algorithm should have a computer code. Instead, the algorithm should be written in such a way that, it can be used in similar programming languages

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1. **Find error in the following algorithm of displaying first N natural numbers**
2. Start
3. i=0, n
4. Read i, n
5. If(i<=n)

Display i

i=i+1

End If

1. Stop

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1. **Find error in the following algorithm of sum of digits of a number is fully divisible by x or not**
2. Start
3. n, s=0, x, r
4. Read a number n
5. Do

s= (n mod 10);

n=n/10

if(n<0)

1. If(s mod x = 0) then

Display “Number is not fully divisible by x”

Otherwise

Display “Number is fully divisible by x”

1. stop

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1. Find error if any in the following algorithm of finding largest of three given numbers

Start

1. Read three numbers A, B,C
2. If( a>b) then

If( a>c) then

L=a

Otherwise

L=c

Otherwise

If(b>c) then

L=b

Otherwise

L=c

1. Display “Largest number is: “, L
2. Stop

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1. Find error if any in the following algorithm to find sum of series 1 – X + X2 –X3…. XN
2. Start
3. Read N, X
4. I = 1, SUM=1, TERM=1
5. while (I >N)

THEN

TERM = TERM - TERM \* X

SUM = SUM + TERM

End While

5. Display value of sum

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1. Find error if any in the following algorithm TO find whether a given character is vowel or

consonant?

Input Format:

Input will take a character either lowercase or uppercase.

Output format

Display character is vowel or consonant

1. Start
2. Read two charactersch and ch1
3. If(ch=a or ch=e or ch=i or ch=o or ch=u)

Display character is vowel

Otherwise

Display character is consonant

1. Stop

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1. Find error if any in the following algorithm to find the factorial of a number
2. Start
3. Read n
4. X=1, i=0
5. While(x<n)

F=F xi

X=X+1

I=i+1

1. Display factorial is X
2. Stop