

LAB TASK -1

PROGRAMMING **FUNDAMENTALS**

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Question #1

Write step by step instructions and draw the flowchart for finding the average of two numbers.

ALGORITHM:

1. Read a
2. Read b
3. $\text{avg} = (a+b)/2$
4. Print avg

Question #2

Write a solution and draw the flowchart for finding the area of a rectangle.

ALGORITHM:

1. Read l
2. Read w
3. For Area of a rectangle ($\text{area} = \text{length} * \text{width}$)
 $a = l * w$
4. Print a

Question #3

Read four lengths a, b, c and d and find out whether they 'can' form a valid square.

ALGORITHM:

1. Read a
2. Read b
3. Read c
4. Read d
5. IF (a==b && b==c && c==d) then,
 Print Yes
ELSE No

Question #4

Input an alphabet (e.g. 'a', 'b', 'c', 'x', 'y', 'z') and display whether the input

Alphabet is a vowel (i.e. a, e, i, o, u) or not.

ALGORITHM:

1. Read x
2. IF (x=="a" || x=="e" || x=="i" || x=="o" || x=="u" || x=="A" || x=="E" || x=="I" ||
x=="O" || x=="U")
 Print "yes 'x' is an vowel"
ELSE
 Print "no 'x' is not a vowel"

Question #5

Find whether a number is divisible by 9 or not.

ALGORITHM:

1. Read n
2. IF $(n \% 9 == 0)$
 Print "YES 'n' is divisible by 9"
ELSE
 Print "NO 'n' is divisible by 9"

X-----x-----X-----x-----X