11th June 2024

$|f(x) - L| < \varepsilon$

whenever L is a the limit of f(x)

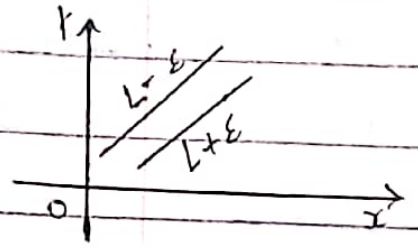
This implies that

$|f(x) - L| < \varepsilon$

$\Rightarrow -\varepsilon < f(x) - L < \varepsilon$

$\Rightarrow L - \varepsilon < f(x) < L + \varepsilon$

$\Rightarrow f(x) \in \{L - \varepsilon, L + \varepsilon\}$



11th June 2024, Tuesday

CSC212 Writer: Oladotiomam-

A program to Read the scores of 80 students one at a time and compute and print their total and average scores. Each student sat for three exams each.

Solution

Program TotalScores

Real Sum, Ave, score1, score2, score3

Integer Counter

Open (Unit=5, File='INSER', STATUS='OLD')

Open (Unit=6, File='OUTSCR', STATUS='NEW')

11th June 2024

DO 60 counter = 1, 80

sum = 0.0

READ(5, 20) Score1, Score2, Score3

Sum = Score1 + Score2 + Score3

Ave = Sum/3

Write(6, 30) Counter, Score1, Score2, Score3,

Write(6, 40) Sum, Ave

10 Continue

Stop

20 Format (3(F5.2, 2x))

30 Format (1X, 'Student' ID, I, 'Score 1',

'Score', 2x, F5.2, / 'Score3', 2x, F5.2x)

40 Format(/, 'Total and Average = 5x,

2(F6.2, 2x), / 'respectively' 1X)

END

Class Assignment

Write a program to compute the root of 80 quadratic equations of the form:

$ax^2 + bx + c = 0$

Using the formula:

$x_1 = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

35

11th June 2024

$$x_2 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$$

Provided the discriminant

$$D = b^2 - 4ac \geq 0$$

Represent the program in a flowchart:

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