1. What is truncation enron?

Ans: Thurstation ennon occurs when we change the mathematical procedure of finding approximate approximate value, on ennon generated from ennon. I model is called than thurseation

from Maclaurin series we get,

 $e^{x} = 1+x+\frac{2e^{2}}{2!}+\frac{x^{3}}{3!}+\dots$

Here, this equation tends to infinity. Let assume we calculate all this and get vaule value of ex is X. But if we co calculate just 1+ 92 + 22 from the series and neglect the other forms than we will not be get X. We'll get free mathematical model the value changed. Her we didn't get X. This is truncation ennon. To calculate ennon

France approx value.

Ay.

Apply BDD to find the numerical value of d (00.5x) = at x = 2.5 cesing step size of 1.5.

horee, X = 2.5 4X = 1.5

F = 22 = 7

2.1

True value,

$$f(2.5) = \frac{d}{dx} e^{0.5x2.5}$$

$$= e^{0.5x2.5}$$

$$= e^{1.25}$$

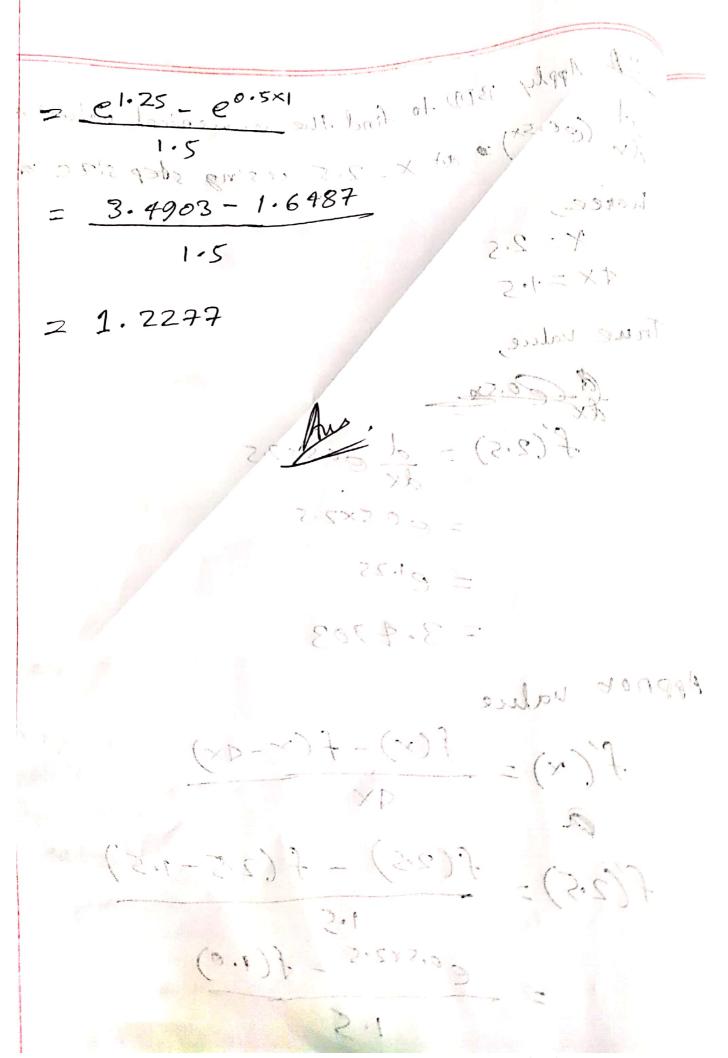
$$= 3.4903$$

Approx value

$$f'(x) = \frac{f(x) - f(x - 4x)}{4x}$$

$$f'(2.5) = \frac{f(2.5) - f(2.5 - 1.5)}{1.5}$$

$$= \frac{e^{0.5 \times 2.5} - f(4.0)}{1.5}$$



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