

$$C \approx \frac{\|x_k - x_{k+1}\|}{\|x_{k+1} - x_{k+2}\|} \infty$$

ASYMPTOTIC ERROR CONSTANT IS A <sup>CONSTANT</sup> VALUE REPRESENTING THE ASYMPTOTIC TREND OF ERROR BY  $\infty$  NORM AT ANY POINT IN THE SERIES OF ITERATIONS

SO NOW, TO PRESENT, .PY FILE MUST BE MADE WHICH ANSWERS

4.1.1, 4.1.2, 4.1.3



4.1.1

- RETURN BLEND N.P. ARRAY



4.1.2

- RETURN PLOT OF ERROR BY  $\infty$  NORM

4.1.3

- RETURN TABLE SHOWING SERIES OF C VALS FROM  $k=0$  ( $i=0$ ) TO  $k=2$  ( $i=2$ )

(4) ADDITIONALLY, SINCE TOTAL ERROR HAS, <sup>PROB</sup>  $10^{-2}$  ONLY <sup>2</sup> DIGITS

(5) ... W/O INCREASING PRECISION OF INTERMEDIATE CALCULATIONS (4) PRESENT 4.1 ARE CORRECT

SO IF ALL MY NUM. FOR 4.1.3; RESULTS ARE CORRECT PRESENT THE FOLLOWING STATEMENT, "0.375 IS THE BEST APPROX. (3)"

(2) ... WHOSE AVERAGE IS 0.375 - SIMILAR TO 0.3 AT  $k=2$

(1) ... BUT EVEN HERE THE APPS OSCILLATE WHERE 0.3 IS THE CALCULATED 'C'. AFTERWARDS ARE SMALL. SO, PRECISION IN APTING C IS MOST

"I THINK 0.375 IS THE BEST APPROXIMATION OF THE ASYMPTOTIC ERROR CONSTANT ('C') SINCE THE DIFFERENCE IN  $x_k$  VECTOR VALUES ARE LARGEST AT THE 1ST ITERATION, WHERE 0.3 IS THE

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