ASSIGNMENT-1

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Sangrum Patro

Programme is attached.

A3) e) Fon 48-Lit arithmetic

Sum will be between 16-32. So the process will

stop at i = 2<sup>74</sup> × 1.76 × 10<sup>13</sup>

For 50-bit anithenetic

Q6). Summation will stop when it becomes 32.

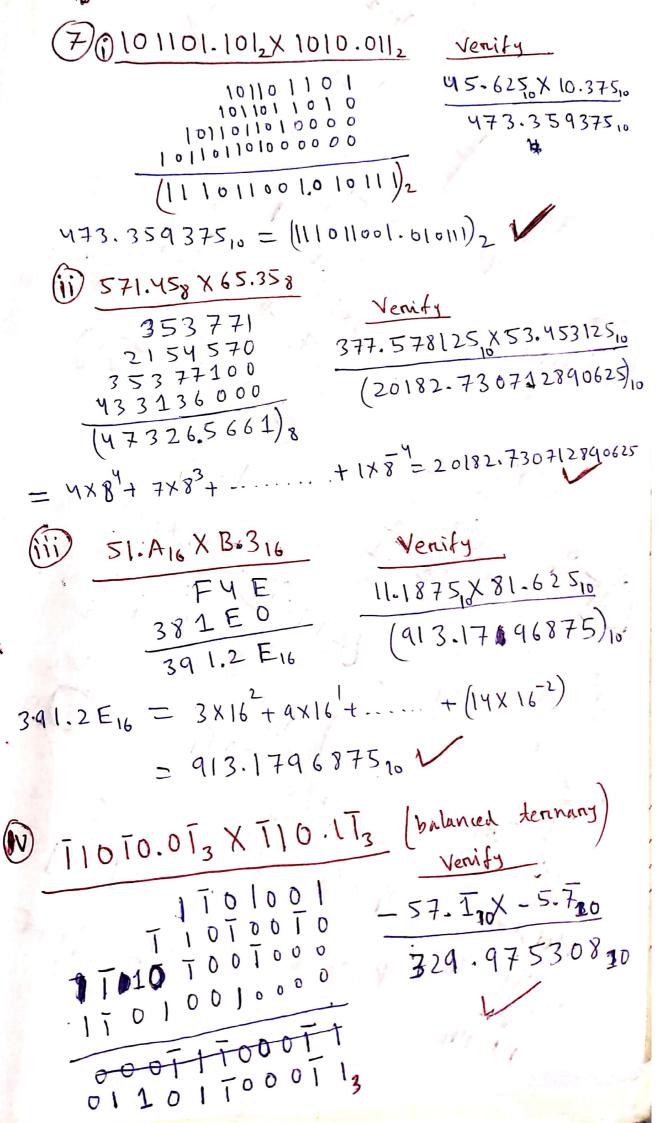
In iii) ? (iv) n = 21 so we can compare the effective rate of convergence of li, iii, iv.

And (iii) ? (iv) are less efficient as fan as

(ii) is concerned as it require 2 square roots

at each step.

while calculating the train of sino, we subtract nearly equal numbers (in (iii) 2 (v)) so it is unstable. so (ii) can achieve full accuracy as compared to other 3.



$$23 + 0.35 = 23 + 0.35$$

$$= |0||_2 + 0.010||_0$$

$$= |0||_1 - 010||_0$$

$$-23.35$$

$$= - \left(010111.01\overline{01110}\right)_{2} = 101000.101001_{2} + 0.00001_{2}$$

## (iii) Negative decinal

## (iv) Balanced termany

$$\frac{22}{7} = 3.958_{-10}$$

$$\frac{22}{7} = 3.142857143 = 3.142857$$

$$= 10.011011$$

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-3.14 = 11.0000001111000012  $= 1.1001000111101011100001 \times 10$ 

-3.14 In IEEE floating Point representation for 32-bit
number is! - 1 10000000 1001000111101011100001

(b) 22 7 ≈ 3.142857

$$= 11.001 = 1.1001 \times 10^{1}$$

In IEEE flowling point representation!

0 10000000 10010010010010010010010