

NAME: ORIOLA MUNIRAT OMBOLAJI

MATRIC NO.: 16/ENG07/024

DEPARTMENT: PETROLEUM ENGINEERING

ASSIGNMENT 2 SOLUTION.

$$f(x) = e^{0.5x}(4-x) - 2$$

$$f'(x) = \frac{e^{0.5x} * (x-2)}{2} - e^{0.5x}$$

Using the formulas below and a guess value of 0.5

$$x_{i+1} = x_i - \frac{f(x)}{f'(x)}$$

$$Ea = \left\| \frac{x_{i+1} - x_i}{x_{i+1}} \right\| * 100$$

<i>i</i>	<i>x</i>	<i>Ea</i>
0	0.5	0
1	1.119 232	55.32 649
2	0.729 82	53.35 725
3	0.983 396	25.78 576
4	0.821 969	19.63 902
5	0.926 229	11.25 64
6	0.859 516	7.761 741

7	0.90246	4.75853
8	0.87492	3.14739

	2	2
9	0.89262 4	1.98308 6
10	0.88126 3	1.28915 9