

$\Delta Q = 10 \text{ mg} \times 1.12 \text{ g}$

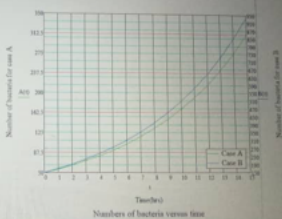
$\Delta Q = 110 \text{ mg} \times 1.12 \text{ g}$

Case A

50
56.488
63.817
72.088
81.453
92.022
103.962
117.431
132.681
149.908
169.359
191.334
216.181
244.259
275.899
311.694

Case B

150
168.463
189.452
214.292
244.258
279.865
321.805
372.394
433.673
508.725
599.678
709.881
843.481
1005.628
1202.687
1443.089



AGWUPHYE LAWRENCE 18/ENJG03/008
 CIVIL ENGINEERING
 ENG 282 ASSIGNMENT

$$y = y_0 e^{kt}$$

$$y = 3y_0; y = 3$$

$$A \frac{y}{y_0} = e^{kt} = 3 \text{ at } t = 9$$

$$B \frac{y}{y_0} = e^{kt} = 9 \text{ at } t = 18$$

$$\therefore y_0 = 50 \text{ --- (i)}$$

$$\therefore y_0 = 150 \text{ --- (ii)}$$

$$\therefore y = 50 e^{kt} \text{ --- (iii)}$$

$$y = 150 e^{kt} \text{ --- (iv)}$$

$$A \therefore 3 = e^{kt}$$

$$\ln 3 = kt$$

$$\ln 3 = 9k$$

$$k = \frac{\ln 3}{9}$$

$$k = 0.122$$

$$a = e^{kt}$$

$$\ln 9 = e^{kt}$$

$$\ln 9 = 18k$$

$$\frac{\ln 9}{18} = k$$

$$k = 0.122$$

$$\therefore y = 50 e^{0.122t} \text{ --- A}$$

$$\therefore y = 150 e^{0.122t} \text{ --- B}$$