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Computer Engineering.
ENG282 Assignment

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

$$y = 3y_0 \quad ; \quad \frac{y}{y_0} = 3.$$

$$B - 9 = e^{kt}$$

$$\ln 9 = 18k$$

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

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

$$18$$

$$k = 0.122.$$

B - At $t = 18$

$$\frac{y}{y_0} = e^{kt} = 9.$$

$$y_0$$

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

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

Therefore.

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

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

This will result in.

$$y = 50 e^{kt} \quad \text{--- (ia)}$$

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

$$\text{For A.} \quad - 3e^{kt}$$

$$\ln 3 = kt$$

$$\ln 3 = 9t$$

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

$$9$$

$$k = 0.122$$

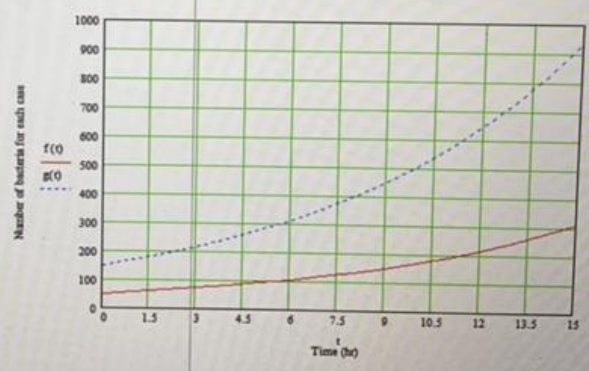
$f(t) = 50 \cdot \exp(0.122 \cdot t)$
 $g(t) = 150 \cdot \exp(0.122 \cdot t)$
 $t = 0, 1, \dots, 15$

f(t) =

50
56.488
63.817
72.098
81.453
92.022
103.962
117.451
132.691
149.908
169.359
191.334
216.161
244.209
275.896
311.694

g(t) =

150
169.463
191.452
216.293
244.358
276.065
311.885
352.354
398.073
449.725
508.078
574.003
648.483
732.626
827.687
935.083



where : g(t) = Number of bacteria for case B
 f(t) = Number of bacteria for Case A

Matrix

- $\begin{bmatrix} \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \end{bmatrix}$
- \times_n \times^1 $| \times |$
- $\vec{0}$ $\vec{1}$ \vec{m} \vec{n} \dots
- \int \sum σ δ

Evalu...

- $=$ $:=$ \equiv
- \rightarrow \leftrightarrow f_x
- x^f $x^f y$ $x^f y$

Math

- \int $\frac{d}{dx}$ $\frac{d^2}{dx^2}$
- \times \div $\sqrt{\quad}$ $\sqrt[n]{\quad}$
- α β γ