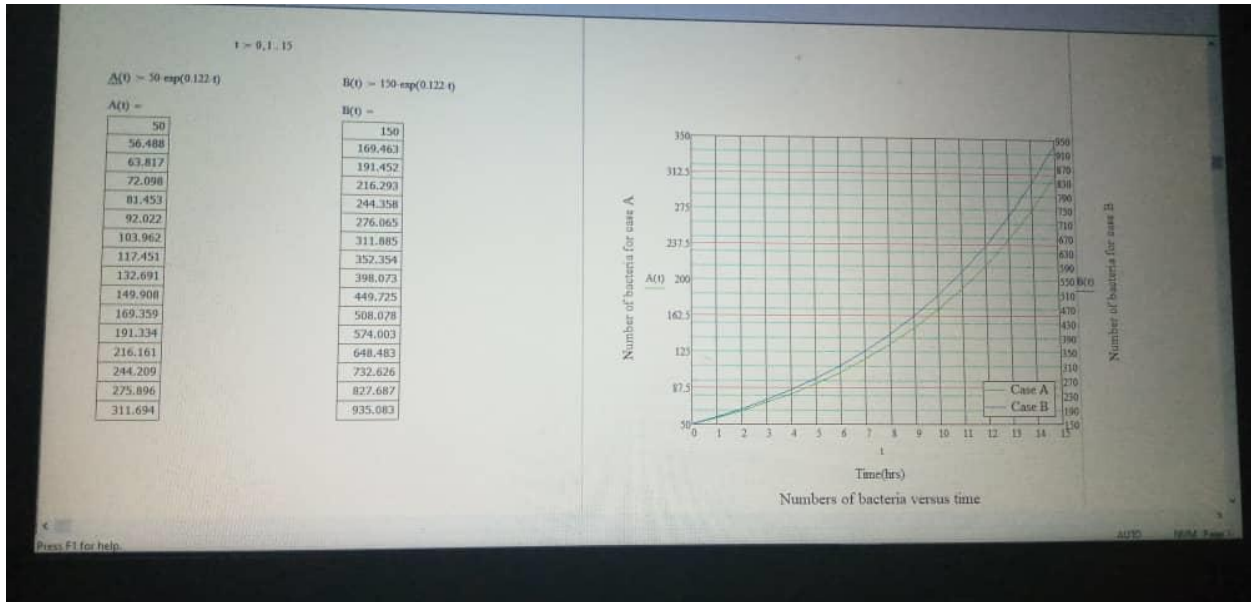


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$y_0$  = Initial substance

$y$  = Final

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

$y = 3y_0$ , #1  
 $y/y_0 = e^{kt} = 3$  at  $t = 9$   
;  $y = 3 \times y_0$

$y/y_0 = e^{kt} = 9$  at  $t = 18$

$y_0 = 50 \dots (i)$  ;  $y = 50e^{kt}$

$y_0 = 150 \dots (ii)$  ;  $y = 150e^{kt}$

$e^{kt}$  = exponential (Konstant  $\times t$ )  
 $\downarrow$   
?

$e^{kt} = 3$

$\ln 3 = kt$

$\ln 3 = 9k$

$k = \frac{\ln 3}{9} = 0.1221$

$e^{kt} = 9$

$\ln 9 = 18k$

$k = \frac{\ln 9}{18} = 0.1221$

$\therefore y = 50e^{0.1221t}$   
 $y = 50e^{0.1221t}$

(Graph attached on the next page)