

OKORIE ANNA IRONIA.

CIVIL ENGINEERING.

181ENG03, 1046.

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

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

A. $y/y_0 = e^{kt} = 3$ at $t = 9$

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

A. $y_0 = 50$ — (i)

B. $y_0 = 150$ — (ii)

$\therefore y = 50e^{kt}$

$y = 150e^{kt}$

A. $3e^{kt}$

$$\ln 3 = kt$$

$$\ln 3 = 9k$$

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

$$k = 0.122$$

$$9 = e^{kt}$$

$$\ln 9 = 18k$$

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

$$k = \underline{\underline{0.122}}$$

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

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

NO - 50 mg/l (2.0)

NO - 100 mg/l (2.0)

NO -

NO -

50	50
54.684	54.684
61.817	61.817
71.004	71.004
81.451	81.451
92.027	92.027
101.962	101.962
112.425	112.425
123.186	123.186
141.008	141.008
161.034	161.034
191.124	191.124
215.162	215.162
241.205	241.205
275.804	275.804
311.001	311.001

120	120
124.632	124.632
131.452	131.452
136.791	136.791
144.554	144.554
154.203	154.203
161.885	161.885
172.564	172.564
184.871	184.871
201.275	201.275
208.228	208.228
218.101	218.101
244.823	244.823
272.220	272.220
311.007	311.007
425.003	425.003

Number of bacteria for case A



Number of bacteria versus