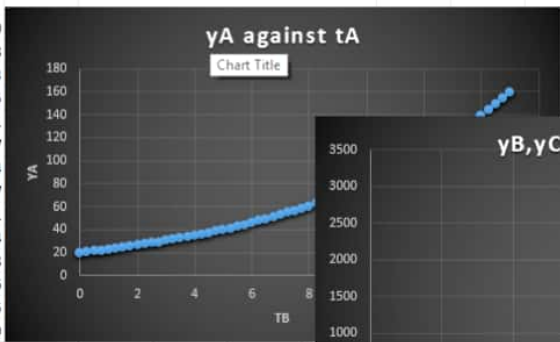


1	ta	yA	tB	yB	yC	yD
2	0	20.70515	0	10	30	50
3	0.25	20.70515	0.5	10.71758	32.15273	53.58788
4	0.5	21.43515	1	11.48665	34.45994	57.43323
5	0.75	22.1909	1.5	12.3109	36.9327	61.5545
6	1	22.97329	2	13.1943	39.58291	65.97151
7	1.25	23.78327	2.5	14.14109	42.42328	70.70547
8	1.5	24.6218	3	15.15583	45.46748	75.77914
9	1.75	25.4899	3.5	16.24337	48.73012	81.21687
10	2	26.3886	4	17.40896	52.22688	87.04481
11	2.25	27.319	4.5	18.65819	55.97456	93.29094
12	2.5	28.28219	5	19.99706	59.99117	99.98528
13	2.75	29.27934	5.5	21.432	64.296	107.16
14	3	30.31165	6	22.96991	68.90973	114.8495
15	3.25	31.38036	6.5	24.61818	73.85453	123.0909
16	3.5	32.48675	7	26.38472	79.15416	131.9236
17	3.75	33.63214	7.5	28.27803	84.83408	141.3901
18	4	34.81792	8	30.30719	90.92158	151.536
19	4.25	36.04551	8.5	32.48197	97.4459	162.4098
20	4.5	37.31638	9	34.8128	104.4384	174.064
21	4.75	38.63205	9.5	37.31088	111.9327	186.5544
22	5	39.99411	10	39.98823	119.9647	199.9411
23	5.25	41.4042	10.5	42.85769	128.5731	214.2885



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[Signature]

16/ENG06/057.

Mechanical Engr.

Eng 282

24/02/2018

Assignment ①

$$\frac{dy}{dt} = ky$$

$$\int \frac{dy}{y} = \int k dt$$

$$\ln y = kt + C$$

$$y = e^{kt+C}$$

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

$$y = y_0 e^{kt} (e^C - y_0)$$

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

$$y = 2y_0$$

When $t=5$

$$2y_0 = y_0 e^{5k}$$

$$2 = e^{5k}$$

$$5k = \ln 2$$

$$k = \frac{\ln 2}{5} = 0.1386$$

$$y = 20 e^{0.1386t}$$

for $1\frac{1}{2}$ days (36 hours).

$$y = 20 e^{0.1386 \times 36}$$

$$\therefore y = 2937.55 \text{ bacteria.}$$