

NAME HARUNIA MUHAMMAD
 Matric 16/ENG04/023
 Module Elect/Elect

Given $d = \alpha \beta^t$ (1)

Comparing eqn(1) to $y = m$

$$\log d = \log \alpha + t \log \beta$$

where $a_0 = \log \alpha$

$a_1 = \log \beta$

	$Y = \log d$	$t = x$	XY	$d(x)$	X^2	Y^2
1	0.301029996	0	0	0	0	0.09061905
2	0.698970004	1	0.698970004	1	1	0.488559067
3	1.278753601	2	2.557507202	2	4	1.635210772
4	1.698970008	3	5.096910013	3	9	2.886409071
5	2.178976947	4	8.715907789	4	16	4.747940537
6	2.672097858	5	13.36048929	5	25	7.140106962
7	3.1568519091	6	18.9411143	6	36	9.965713925
8	3.654369091	7	25.58058364	7	49	13.35441345
9	4.111800007	8	32.89440006	8	64	16.9068193
10	4.614163911	9	41.5864537	9	81	21.28997336
11	5.045405135	10	50.45405135	10	100	25.45611297

$$\Sigma y = 29.41132046$$

$$\Sigma x = 55$$

$$\Sigma xy = 199.8268839$$

$$\Sigma x^2 = 385$$

$$\Sigma y^2 = 103.9620485$$

$$\Sigma y = 90.121 + a, \Sigma x$$

$$29.41132046 = 90.121 + a(11) + a(55, 5) \dots \sqrt{11}$$

(2)

$$E_{xy} = a_0 E_2 + 4.2z^2$$

$$199.8268839 = a_0(55) + a_1(385) \quad \dots (i)$$

Solving eqn (i) & (ii)

$$29.41133046 = 11a_0 + 55a_1$$

$$199.8268839 = 55a_0 + 385a_1$$

$$a_0 = \begin{vmatrix} 29.41133046 & 55 \\ 199.8268839 & 385 \end{vmatrix} \\ \begin{vmatrix} 11 & 55 \\ 55 & 385 \end{vmatrix}$$

$$\frac{(29.41133046)(385) - (55)(199.8268839)}{(11 \times 385) - (55 \times 55)}$$

$$a_0 = 0.27511$$

$$a_1 = \begin{vmatrix} 11 & 29.41133046 \\ 55 & 199.8268839 \end{vmatrix} \\ \begin{vmatrix} 11 & 55 \\ 55 & 385 \end{vmatrix}$$

$$a_1 = \frac{(11 \times 199.8268839) - (29.41133046 \times 55)}{(11 \times 385) - (55 \times 55)}$$

$$a_1 = 0.47973$$

$$a_0 = \log \alpha$$

$$0.27511 = \log \alpha$$

$$\alpha = 1.884$$

$$a_1 = \log \beta$$

$$0.47973 = \log \beta$$

$$\beta = 3.0181$$

Umoren Edwin
16/ENG041060
ELECT/ELECT
ENG 384

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$$\Sigma y = 29.41132046$$

$$\Sigma x = 55$$

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$$\Sigma x^2 = 385$$

$$\Sigma y^2 = 103.9620485$$

$$\Sigma y = na + a_1 \Sigma x$$

$$29.41132046 = a_0(11) + a_1(55) \quad \text{--- (1)}$$