

•			4 1.	
2	Use regression meth	109 to tit	the chrole	x = 9+6m+cm2
	to the data given de			J
	M3 -2 -1		2 3	

b = -1.1379

a = 2.8966

2.0

Given regression equation is & y = a + bn + cn2.

normat equations ares

Solvang (1) and (11.) weget;

of The required linear equation

24 = 12 9 5 m2 + 15 5 m3 + C & n 4

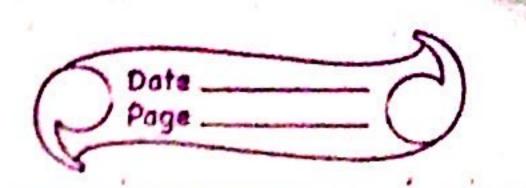
-	Tal	bie to	find	5n,5	y, 5n2	5 23 2n	1,224115	n24
	N	4	1 n2	M3	<u>~</u> 4	NY	n24	d
	-3	1.7	9	-27	8,7	-3.3	9.90	
	-2	1.3	Ÿ	-8	16	-2.6	5.2	
	-1	7.6	1	-1	1	-1.6	1.6	
	0	2.0	0	0	0	0	0	
The same of the sa	1	2-7	1	1	100	2.7	2.7	And the state of t
	2	3.4	9	8	16.0	6.8	13.6	
	3	4.1	g	27	810000	12.3	3.6.9	
	=0	y=16.2	5n2-28	Sp = 0	En4=196	Eny=14.	3 5 NJ d= 63	9.

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Substituting values of equ (1.) (3) are we get.
     16.2 = 7 a + 0 b + 28c - (1v)
     14.3 = 0a + 28b + 0c - (v)
    69.9 = 28a + Ob + 196c - (VI)
   Bolugny (W), (W) and (W) we get;
          a = 2.0714
          F012.0.= d
        C=0.0607.
  The required linear equation is : 4=2.0714 +0.50
                                   J+0.0607 n2.
Fit the following set of data is a curve of the
form 4 = aspr
       25/38/
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Regression eq- in emponential form is given as y=qebx.

The mormal eq ave; we have



 $0 \times \log y + \log a + \log e$ $le + \log y = y$ log a = A $\log e = B$ when,

Y = A + Bnwe find values of A and B using, $\Xi Y = nA + B \le n - (1)$ $\Xi XY = A \le X + B \le X^2 - (11)$

Table to find Sx, Sy, Sxy, Sx2

	n	14	1 212	Y = 209 (4)	N.4
	2	25	4	1.3979	2.7959
	4	38	16	1.5798	6.3192
	6	56	36	1.7482	70.0833
	8	84	64	1.9243	15.39uy
1	n=	Sy =	5x2-	2y = 6.6502.	En.y = 34.9985
	20	203	120		

Subsituting values in eqn (1.) and (11.); 6.6502 = 4A + 20B - (111.)34.9985 = 20A + 120B - (11.)

Solving (111.) and (1v.) we get; A = 1.22565

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_==						
		le. 009 a =	1.2256	5		
<u> </u>		or, q =	101.22			
_:			16.813	2		
					•	
/		B=0.08;	738		2010	
		9 pold.91			= 0.2012.	
			Dog	e		
<u> </u>	100	equipped eq	n becom	nesj	0.201221.	
			y = 16.	8132	e 0.201221.	The last
_/						
<u></u>	Ri					
	11	1 -		of a d	ata to a c	curve of the
	for	m y = ani	2+B	<i>f</i>		
			<u> </u>			
		MI	2	3	4	
		7-1.51	0.99	88.8	7.66.	
1 127	Son					
		Given equ	igtion:			
			y = 9 n ² +	b		
				n		
		1	01.010	0 - 0.		
	11hen	ormal e			en as:	
The state of the s		5y=95.	n2 + b 5	_1	<u>-(1·)</u>	
			•	<u>n</u>		
		24 = as	1 + b	51-	-(III)	
		~3	2i'	ny		
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M			To	find	the v	alue of	variab	les follo	1	16 is neeq:
J		1		Y	2	1/2	η3	4/23	24	1/24.
1			L	-2.52	1	1	1	-L-ST	T	1
1		1.5	2	0.99	4	0.5	2	0.1237	TG	0.0625
		3	3	8.88	9.	0.33	27	0.3289	.87	0.0123
		4	,	7-66	16	0.25	64	0.1196	256	0.0039
	4	n=1	0	2y=	5×2=	51/n=	5n3=	24/232	5×4=	51/n4 =
				16.02	30	2.08	Loo	-0-9377	.354	1.0787.
	1									
	So equation becomes									
	16.02 = 309 + 2.08b - (111.)									
	-0.9377 = 2.08a + 1.0787b - (1v)									
	Solving eqt (111) and (1v),									
	a = 0.6864									
	5=-2-1949									
•										
	The regel equation is;									
	$y = 0.686 y^2 - 2.1949$									
					U				- 4	
	x &									