

2372035

Aqilan Febiana Santika

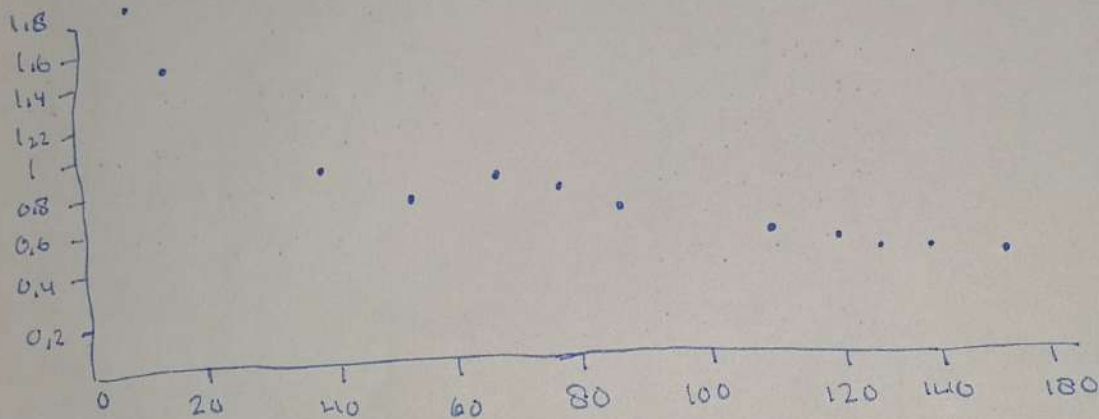
Pr Case 12

Statistika (A)

Hal 01

08-06-25

1.	x	y	X=x	Y=lny	X ²	Y ²	XY	y-pred	xy
	13	1,84	13	0,609766	169	0,3718	7,9269	1,3950	23,92
	20	1,57	20	0,451076	400	0,2034	9,0215	1,3151	31,4
	40	0,92	40	-0,08338	1600	0,0069	-3,3352	1,11115	36,8
	55	0,70	55	-0,35667	3025	0,1272	-19,6171	0,9792	38,5
	70	0,84	70	-0,17435	4900	0,0303	-12,2047	0,8629	58,8
	79	0,77	79	-0,26136	6241	0,0683	-20,6478	0,7999	60,83
	88	0,69	88	-0,37106	7744	0,1376	-32,6536	0,7414	60,72
	110	0,61	110	-0,4943	12100	0,2443	-54,3726	0,61600	67,1
	121	0,57	121	-0,56212	14641	0,3159	-68,0164	0,5614	68,97
	130	0,53	130	-0,63488	16900	0,4030	-82,5342	0,52045	68,9
	139	0,51	139	-0,67334	19321	0,4533	-93,5949	0,4824	70,89
	150	0,50	150	-0,69315	22500	0,4804	-103,972	0,4397	75
			1015	-3,2437	109541	2,8430	-474		661,83

1. Linear regression ($y = A + Bx$)

$$A = 1,509600481$$

$$B = -0,00794602$$

$$r = -0,85781449$$

$$r^2 = 0,735845702$$

$$x = 100 ? \quad y = 0,714998927$$

2. e regression

$$A = 1,556565873$$

$$B = -0,008427116$$

$$C = 0,442482031$$

$$D = -0,008427116$$

$$r = -0,92499$$

$$r^2 = 0,855605$$

$$x = 100 ? \quad y = 0,670163269$$

$$3. e2 = r = 0,915863$$

$$r^2 = 0,838805$$

4. exponential AB

$$A = 0,799312093$$

$$B = 0,997026924$$

$$C = -0,22400781$$

$$D = -0,0029775$$

$$r = -0,92499$$

$$r^2 = 0,855605$$

$$x = 100 ? \quad y = 0,593478526$$

5. Logarithmic

$x = \ln x$	$y = y$
2,56495	1,84
2,99573	1,57
3,68888	0,92
4,00733	0,7
4,2485	0,84
4,76945	0,77
4,47734	0,69
4,70048	0,61
4,79579	0,57
4,86753	0,53
5,01064	0,51
	0,5

$$A = 3,07046$$

$$B = -0,5289$$

$$C = 3,07046$$

$$D = -0,5289$$

$$r = -0,9654$$

$$r^2 = 0,93203$$

$$x = 100 ? , y = -49,821$$

6. Power Regression

$y = \ln y$
0,60977
0,45108
-0,0834
-0,3567
-0,1744
-0,2614
-0,3711
-0,4943
-0,5621
-0,6349
-0,6733
-0,6931

$$A = 7,09461$$

$$B = -0,5281$$

$$C = 1,95934$$

$$D = -0,5281$$

$$r = -0,9801$$

$$r^2 = 0,96065$$

$$x = 100 ? \Rightarrow 0,62325$$

7. Inverse Regression

$x = 1/x$
0,07692
0,05
0,025
0,01818
0,01429
0,01266
0,01136
0,00909
0,00826
0,00769
0,00719
0,00667

$$A = 0,4332$$

$$B = 19,6165$$

$$r = 0,98021$$

$$r^2 = 0,96081$$

$$C = 0,4332$$

$$D = 19,6165$$

8. Hyperbolic regression

$y = 1/y$
0,54348
0,63694
1,08696
1,42857
1,19048
1,2987
1,144928
1,1639361
1,75439
1,88679
1,90678

2

$$A = 1,81134$$

$$B = -19,652$$

$$C = 1,81134$$

$$D = -19,652$$

$$r = -0,8741$$

$$r^2 = 0,76412$$

Jadi, regresi yg paling

akurat adalah

Inverse Regression

dengan nilai

$$r^2 = 0,96081$$