Stats.Blue

Polynomial Regression Calculator

Variable Names (optional):

Data goes here (enter numbers in columns):

Explanatory (x)	Response (y)
-0.000000000000000000 000045678 0.0000000000000000 00023456 -0.000000000000000000 000065432 -0.000000000000000000 000098765 0.0000000000000000 00089012 0.0000000000000000 00034567 -0.000000000000000000 000012345 0.0000000000000000 00109876	-100000000.012345 50000000.045678 -70000000.023456 80000000.067890 -90000000.012345 -60000000.034567 100000000.056789 30000000.078901 -40000000.012345 20000000.090123 -100000000.034567 50000000.067890 -70000000.012345 80000000.056789 -90000000.078901

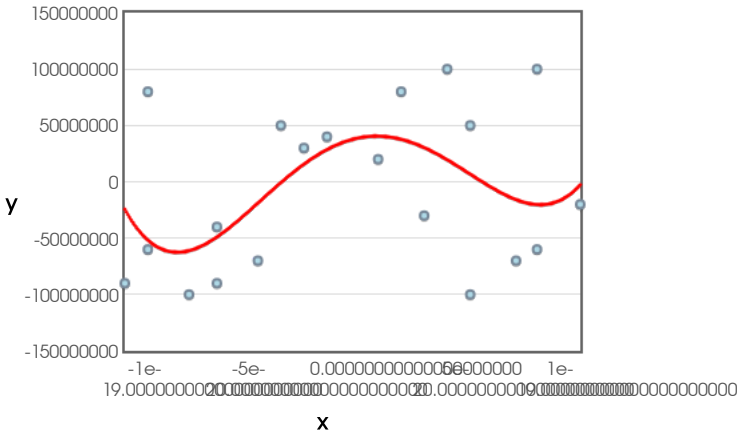
Include Regression Curve: ☑

Degree: 4

Polynomial Model: $y = \beta_0 + \beta_1 x + \beta_2 x^2 + \beta_3 x^3 + \beta_4 x^4$

Increase Degree | Decrease Degree

Display output to 4 decimal places | Calculate



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Regression Polynomial: $y = 1.3659390536245894e+84x^4 - 3.219513375197094e+64x^3 - 2.0731021591053355e+46x^2 + 4.872796801$

R-squared: $r^2 = 0.208$

Adjusted R-squared: $r^2_{\text{adj}} = 0.0595$

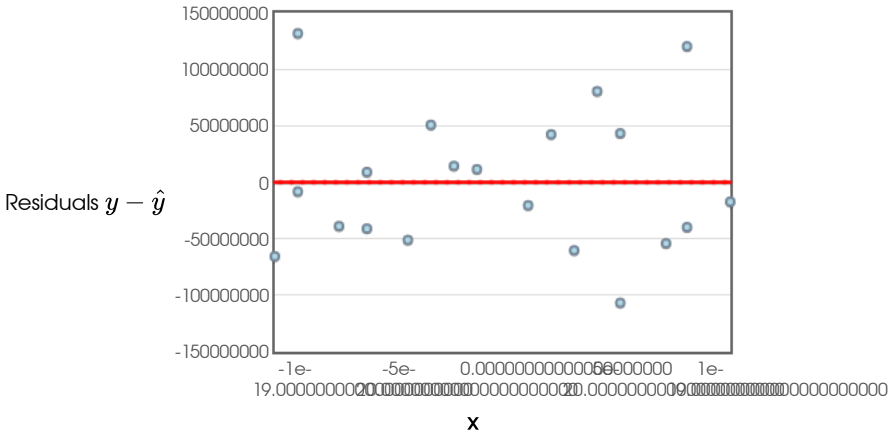
Residual Standard Error: 70891330.443 on 15 degrees of freedom

Coefficient	Estimate	Standard Error	t-statistic	p-value
β_0	37622103.9843	32911443.4881	1.1431	0.2709
β_1	4.872796801541838e+26	5.857515595784295e+26	0.8319	0.4185
β_2	-2.0731021591053355e+46	1.4988087094121037e+46	-1.3832	0.1869
β_3	-3.219513375197094e+64	6.798367409313919e+64	-0.4736	0.6426
β_4	1.3659390536245894e+84	1.2489128092195094e+84	1.0937	0.2913

Analysis of Variance Table

Source	df	SS	MS	F-statistic	p-value
Regression	4	19796289134650944	4949072283662736	0.9848	0.4454
Residual Error	15	75383710979733150	5025580731982210		
Total	19	95180000114384100	5009473690230742		

Residual Plot



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