Stats.Blue

Polynomial Regression Calculator

Variable Names (optional):

Explanatory (x) | Response (y)

Data goes here (enter numbers in columns):

Explanatory (x)	Response (y)
-0.000000001234	-0.000000007890
0.000000004567	0.000000005678
-0.000000009012	-0.000000006789
0.000000003456	0.000000001234
-0.000000002345	-0.000000005678
0.000000007890	0.000000009012
-0.000000004567	-0.000000003456
0.000000002345	0.000000004567
-0.000000006789	-0.000000008901
0.000000001234	0.000000006789
-0.000000007890	-0.000000002345
0.000000005678	0.000000001234
-0.000000009012	-0.000000004567
0.000000008901	0.000000007890
-0.000000003456	

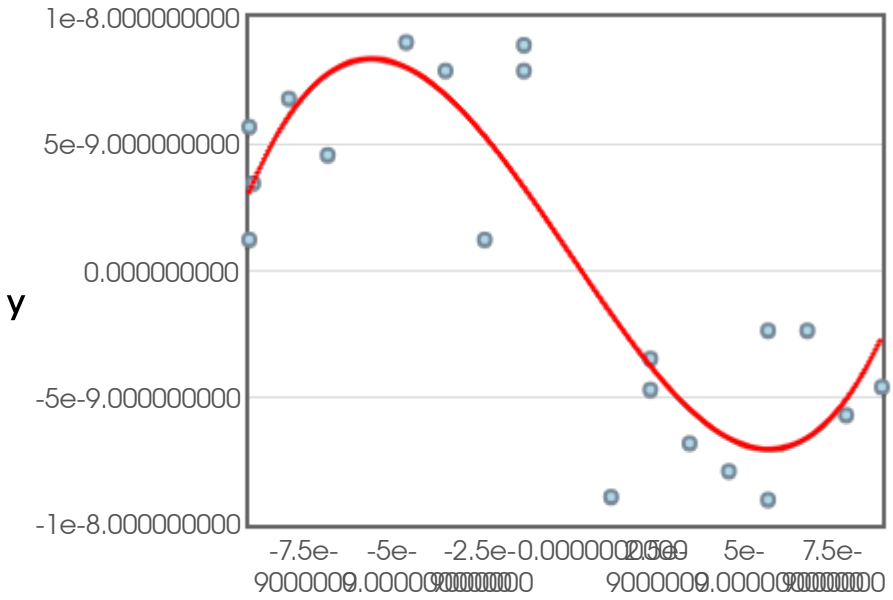
Include Regression Curve: ☑

Degree: 3

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

Increase Degree | Decrease Degree

Display output to 4 decimal places | Calculate



x

Download Scatter Plot JPEG

Regression Polynomial:	$y = 21562822812545244.0000x^3 - 4533663.3187x^2 - 2.0491x + 0$
R-squared:	$r^2 = 0.7435$
Adjusted R-squared:	$r^2_{\text{adj}} = 0.7133$
Residual Standard Error:	0 on 16 degrees of freedom

Coefficient	Estimate	Standard Error	t-statistic	p-value
β_0	0	0	0.6606	0.5183
β_1	-2.0491	0.376	-5.4502	0.0001
β_2	-4533663.3187	28207998.2673	-0.1607	0.8743
β_3	21562822812545244	6025690948230343	3.5785	0.0025

Analysis of Variance Table

Source	df	SS	MS	F-statistic	p-value
Regression	3	0	0	15.4577	0.0001
Residual Error	16	0	0		
Total	19	0	0		

Residual Plot

Residuals $y - \hat{y}$