Stats.Blue

Polynomial Regression Calculator

Variable Names (optional):

	Explanatory (x)	Response (y)

Data goes here (enter numbers in columns):

Explanatory (x)	Response (y)
0.5	1.2
1.0	0.8
0.2	0.6
1.5	0.3
0.7	1.1
0.3	0.4
1.2	0.9
0.8	1.4
0.1	0.7
1.3	0.5

Include Regression Curve: ☑

Degree:

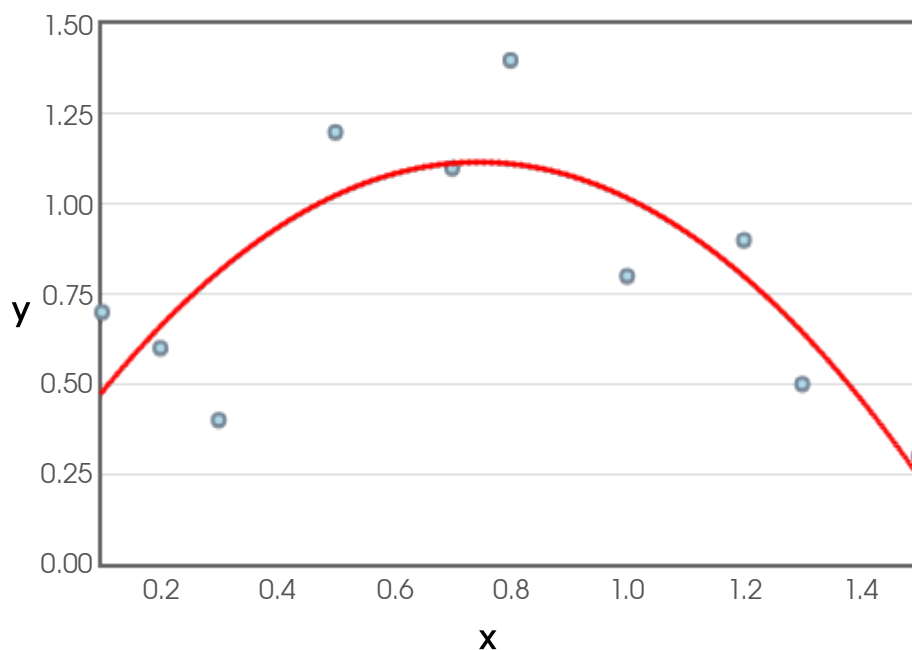Polynomial Model: $y = \beta_0 + \beta_1 x + \beta_2 x^2$ 2

[Increase Degree] [Decrease Degree]

Display output to [4 decimal places ▾] [Calculate]

Regression Polynomial: $y = -1.5344x^2 + 2.2872x + 0.2639$

R-squared: $r^2 = 0.642$

Adjusted R-squared: $r^2_{\text{adj}} = 0.5972$

Residual Standard Error: 0.2445 on 7 degrees of freedom

Coefficient	Estimate	Standard Error	t-statistic	p-value
β_0	0.2639	0.2291	1.1523	0.287
β_1	2.2872	0.7064	3.2377	0.0143
β_2	-1.5344	0.4401	-3.4868	0.0102

Analysis of Variance Table

Source	df	SS	MS	F-statistic	p-value
Regression	2	0.7505	0.3752	6.2764	0.0275
Residual Error	7	0.4185	0.0598		
Total	9	1.169	0.1299		

Residual Plot