



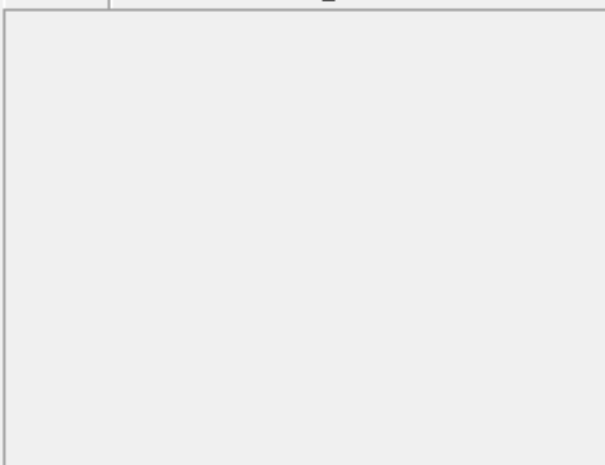
1

	X	Y		
1	2.3	0.25		
2	4.3	1.15		
3	6.3	3.82		
4	8.3	10.5		
5	10.3	12.21		
6	12.3	9.94		
7	14.3	2.1		
8	16.3	0.98		
9	18.3	0.2		
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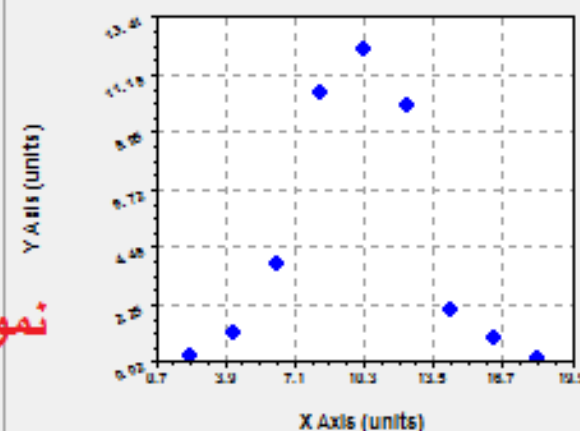
بعد از باز کردن برنامه داده های محور
افقی (X) و عمودی (Y) را وارد کنید.

نمودار نقطه ای در قسمت پایین-راست دیده می شود.

Rank Regression



Data Plot



File Edit Data Interpolate **Apply Fit** Tools Window Help

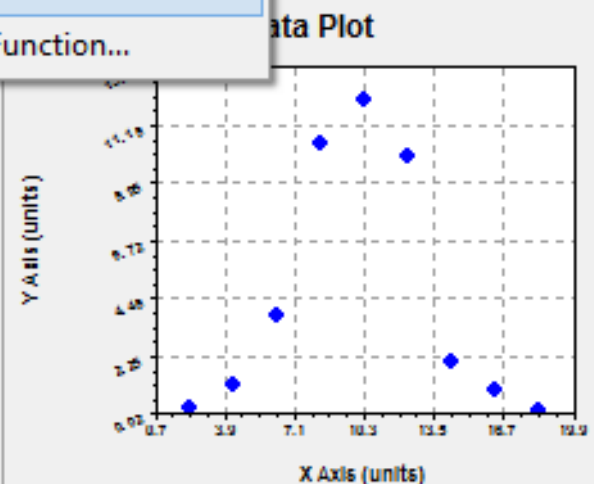
Linear...
 Quadratic...
 nth Order Polynomial...
 Exponential Family ▶
 Power Law Family ▶
 Yield-Density Models ▶
 Growth Models ▶
 Sigmoidal Models ▶
 Miscellaneous ▶
 User Model...

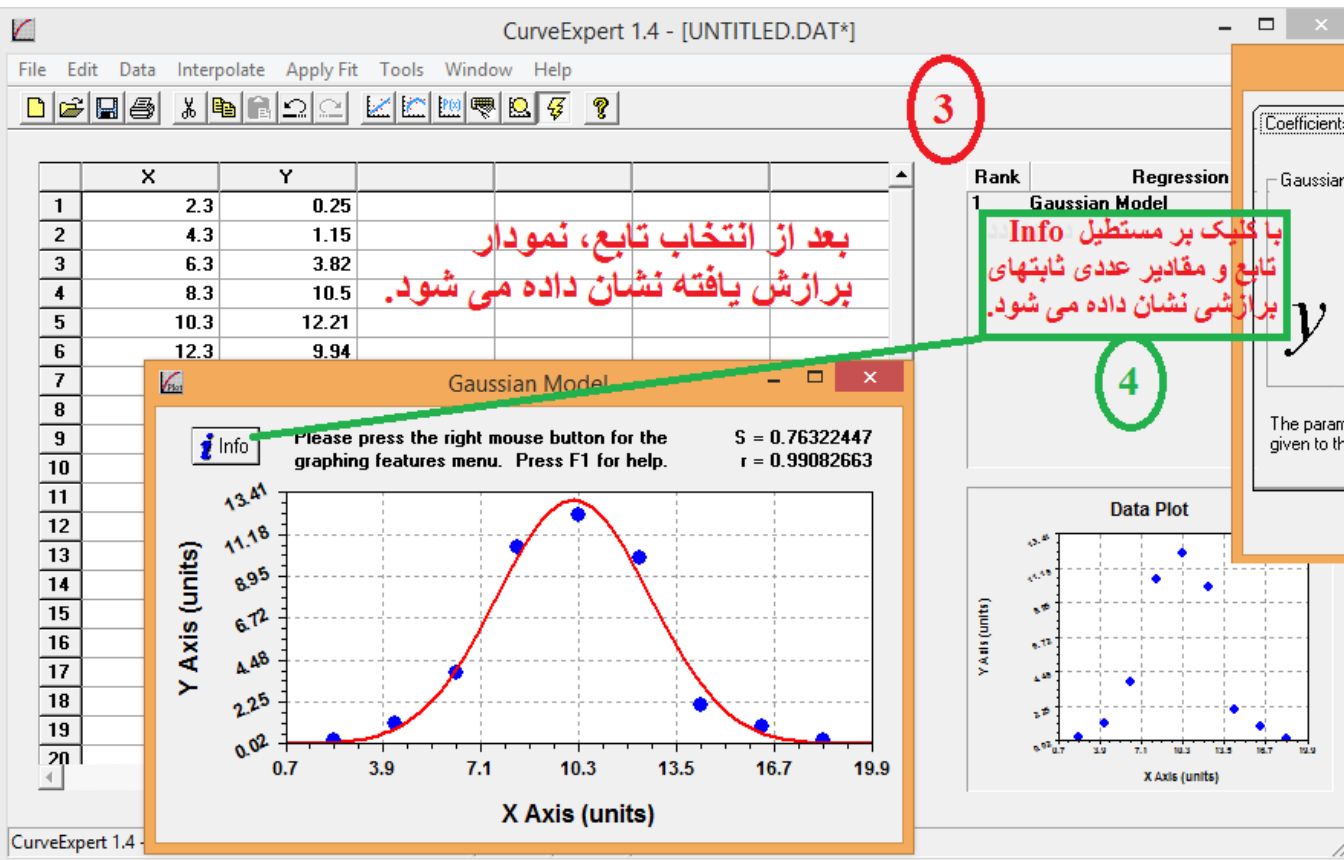
Hyperbolic...
 Sinusoidal...
 Heat Capacity...
 Gaussian Model..
 Rational Function...

2

Rank	Regression
1	Gaussian Model

در منوی نوار بالا در بخش **Apply Fit**
 انواع توابع قابل برآزش توسط نرم افزار
 دیده می شود که برای مثال انتخاب تابع
 گاوسی نشان داده شده است.





بعد از انتخاب تابع، نمودار برازش یافته نشان داده می شود.

با کلیک بر مستطیل Info تابع و مقادیر عددی ثابتهای برازشی نشان داده می شود.

Model Information - [Gaussian Model]

Coefficients: History Covariance Residuals Comments

Gaussian Model

$$y = ae^{-\frac{(x-b)^2}{2c^2}}$$

Coefficients:
 a = 1.30177379231E+001
 b = 1.01065196299E+001
 c = 2.50384200923E+000

توجه: به صورت نماد علمی نوشته شده است.

The parameters for the above model equation are given to the right in the coefficient list.

Close Copy Help

در تابع گاوسی **b** میانگین، **c** انحراف معیار و **a** دامنه (مقدار بیشینه) تابع است.
 در تابع برازشی بالا
a=13.0 , b=10.1 , c=2.50

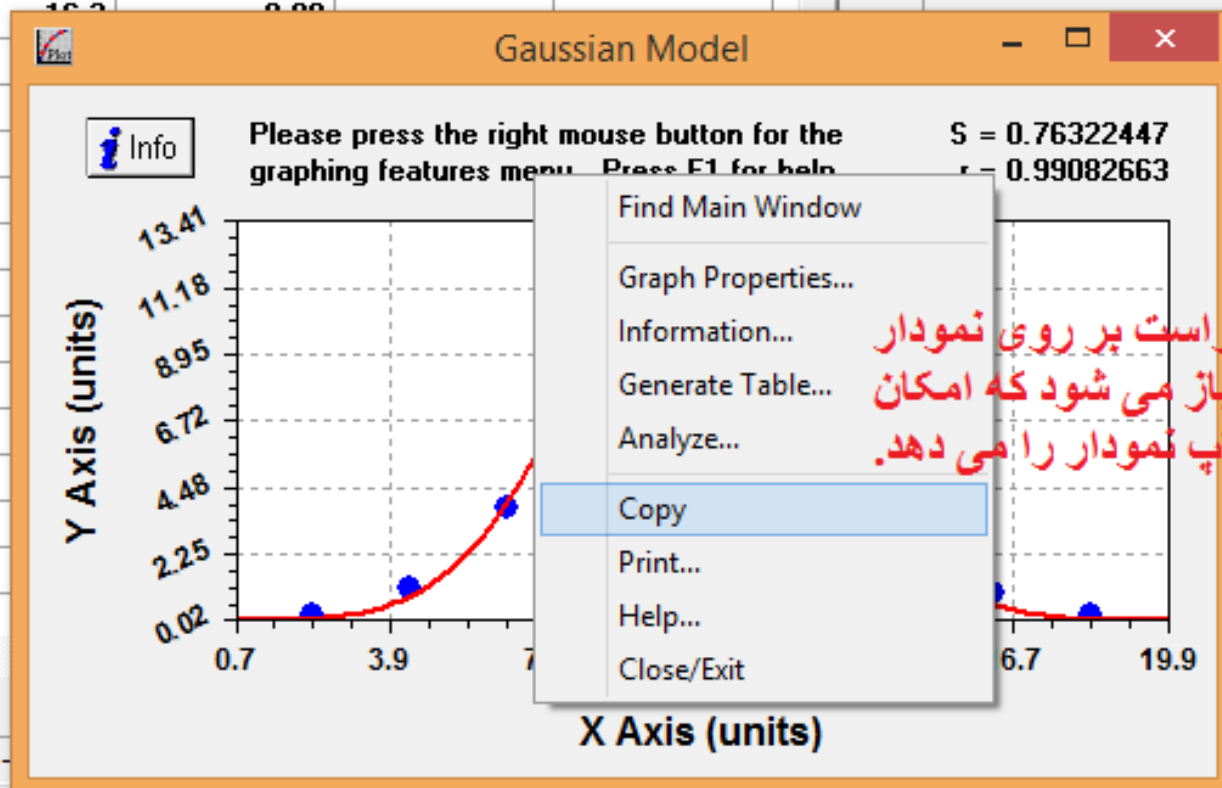
File Edit Data Interpolate Apply Fit Tools Window Help

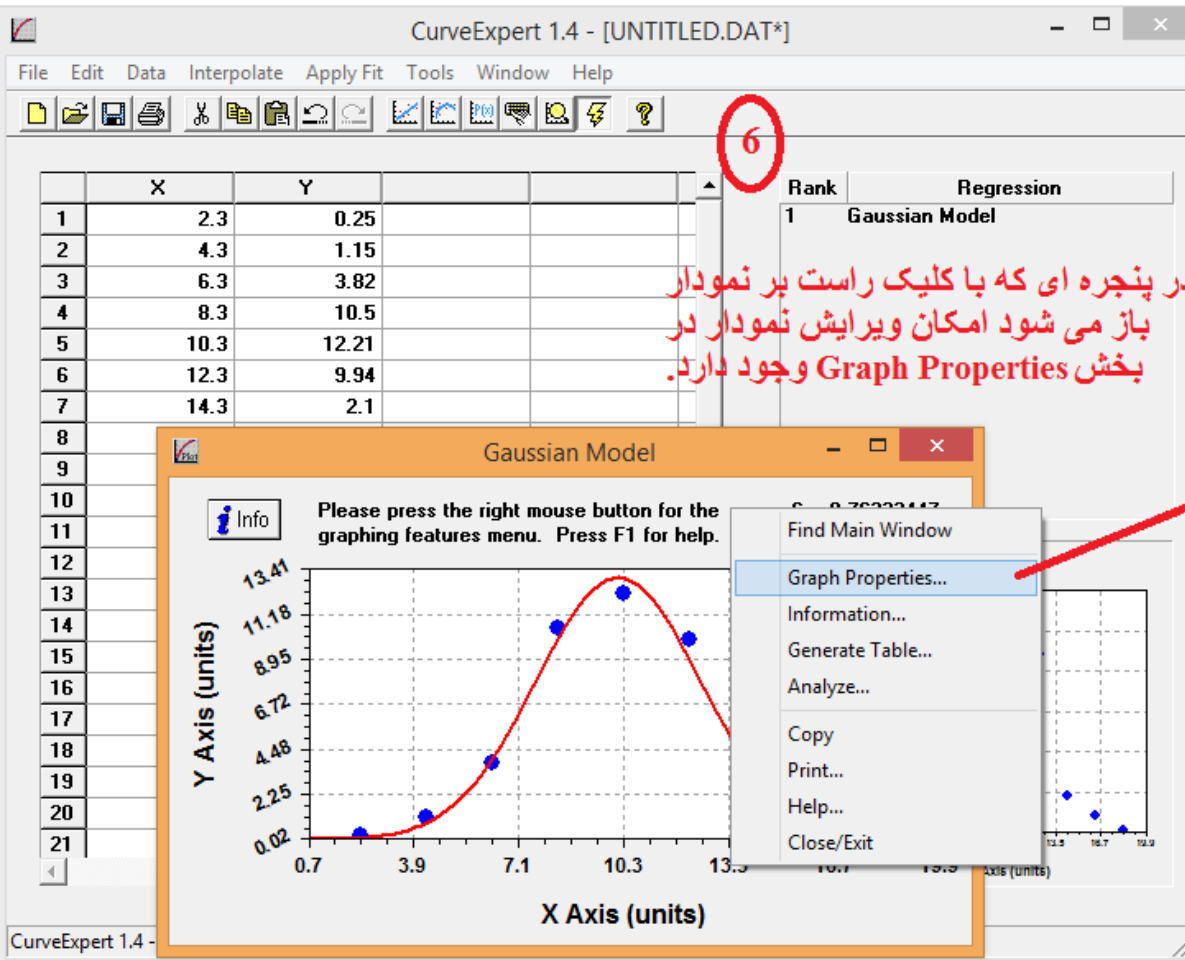


5

	X	Y		
1	2.3	0.25		
2	4.3	1.15		
3	6.3	3.82		
4	8.3	10.5		
5	10.3	12.21		
6	12.3	9.94		
7	14.3	2.1		
8	16.3	0.99		
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21				

Rank	Regression
1	Gaussian Model





Graph Properties - [Gaussian Model]

پیش فرض نرم افزار

X Axis Y Axis Point/Line Overall

Scaling

19.9 High

0.7 Low

3.2 Increment

3 No. of Minors

Miscellaneous

Label X Axis (units)

Show Label Font...

Show Grid Lines

Grid Lines at Minors

Ticks Inside Line at X=0

Tick Labels

Fixed Point Font...

Scientific

1 Precision 0 Rotation

Scale Type

Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

Graph Properties - [Gaussian Model]

X Axis Y Axis Point/Line Overall

Scaling

High 19.9

Low 0.7

Increment 3.2

No. of Minors 3

Miscellaneous

Label X Axis (units)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside

Line at X=0

Tick Labels

Fixed Point

Scientific

Precision 1

Rotation 0

Scale Type

Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

پیش فرض نرم افزار

Graph Properties - [Gaussian Model]

X Axis Y Axis Point/Line Overall

Scaling

High 20

Low 0

Increment 4

No. of Minors 4

Miscellaneous

Label Time (s)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside

Line at X=0

Tick Labels

Fixed Point

Scientific

Precision 0

Rotation 0

Scale Type

Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

7 ویرایش محور افقی (X)

Graph Properties - [Gaussian Model]

X Axis Y Axis Point/Line Overall

Scaling

High 15

Low 0

Increment 5

No. of Minors 4

Miscellaneous

Label Frequency

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside

Line at Y=0

Tick Labels

Fixed Point

Scientific

Precision 0

Rotation 40

Scale Type

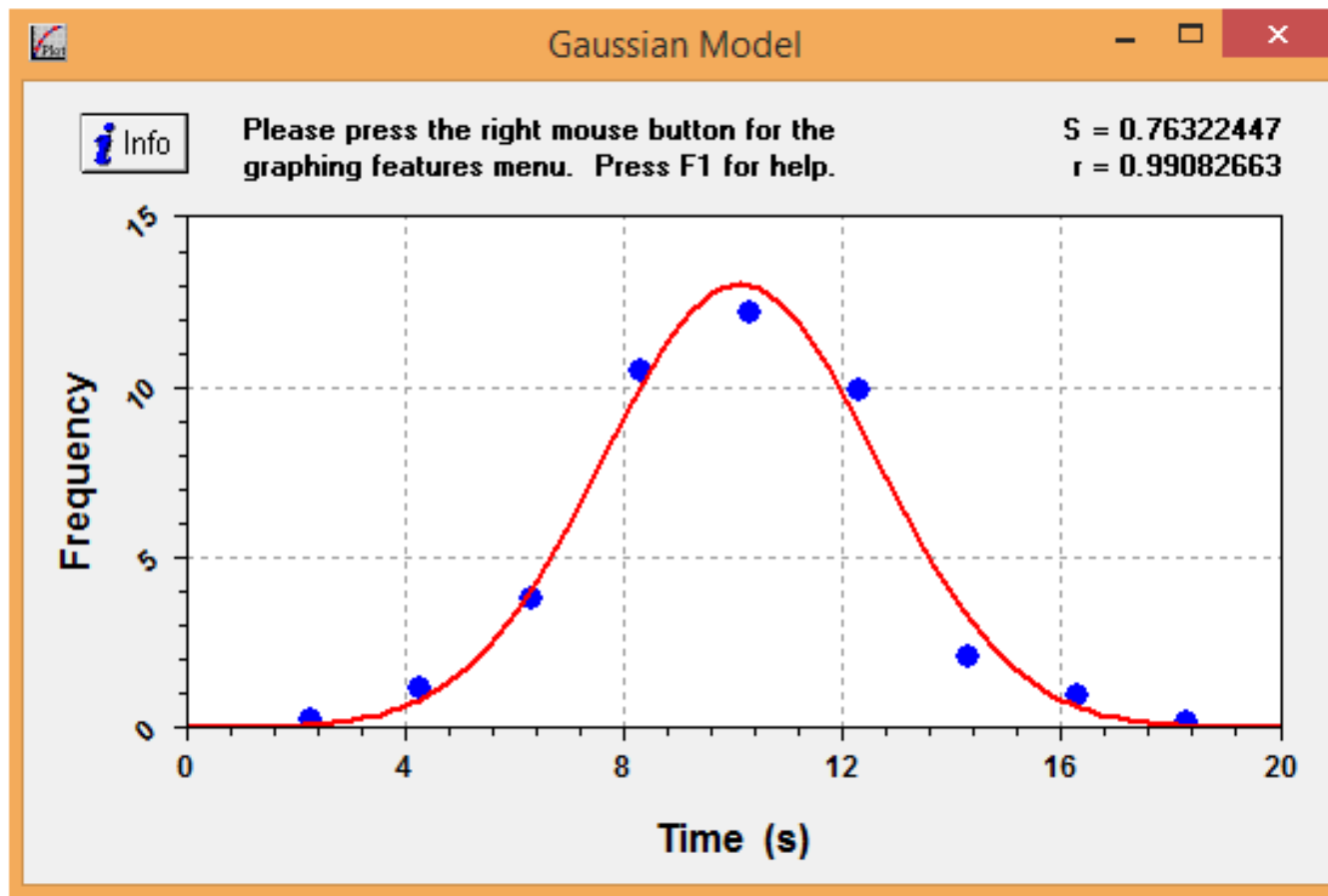
Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

8 ویرایش محور عمودی (Y)

اگر بازه تغییرات مقادیر عددی محورها کوچک است باید Increment کوچکتر از یک انتخاب شود و Precision هم بزرگتر از صفر تا اعداد نمایشی محورها مناسب شوند.



نمودار ویرایش شده بعد از کلیک بر OK



Define a user model (Alt+AU)

	X	Y	Rank	Regression
1	0.21	5.6	1	User-Defined Model
2	0.34	4.02		
3	0.45	3.71		
4	0.57	3.59		
5	0.78	3.57		
6	1.05	4.09		
7	1.52	4.97		
8				
9				
10				
11				
12				
13				
14				
15				
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18				
19				
20				
21				

Define User Model

Enter User Model

Define your nonlinear regression model below. Use x for the independent variable, and a..s for the parameters. Use functions and operators listed in the help documentation.

- Bacon-Watts Double-Line
- Bent Hyperbola Model
- BET Model
- Beta Distribution
- Cauchy Model
- Chapman-Richards Model

برای برازش تابعی دلخواه باید آن را
 در پنجره Define a user model
 بنویسید. تابع برازشی در شکل راست
 $y=ax+b/x$
 است.

CurveExpert 1.4 - [UNTITLED.DAT*]

File Edit Data Interpolate Apply Fit Tools Window Help

	X	Y
1	0.21	5.6
2	0.34	4.02
3	0.45	3.71
4	0.57	3.59
5	0.78	3.57
6	1.05	4.09
7	1.52	4.97

Define a user model (Alt+AU)

Define User Model

Enter User Model

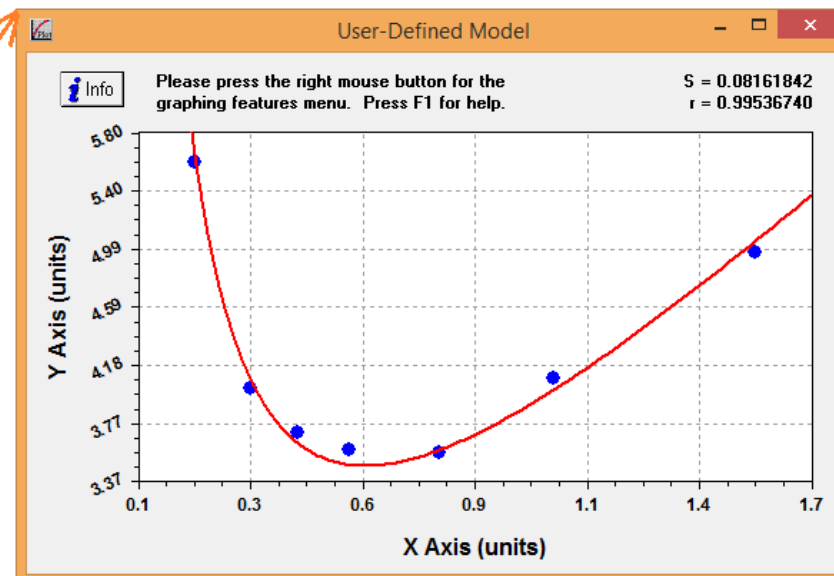
Define your nonlinear regression model below. Use x for the independent variable, and a..s for the parameters. Use functions and operators listed in the help documentation.

- Bacon-Watts Double-Line
- Bent Hyperbola Model
- BET Model
- Beta Distribution
- Cauchy Model
- Chapman-Richards Model

برای برازش تابعی دلخواه باید آن را در پنجره Define a user model بنویسید. تابع برازشی در شکل راست است.

$y = ax + b/x$

CurveExpert 1.4 UNTITLED.DAT



CurveExpert 1.4 - [UNTITLED.DAT*]

File Edit Data Interpolate Apply Fit Tools Window Help

	X	Y
1	0.21	5.6
2	0.34	4.02
3	0.45	3.71
4	0.57	3.59
5	0.78	3.57
6	1.05	4.09
7	1.52	4.97
8		
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20		
21		

Define a user model (Alt+AU)

Define User Model

Enter User Model

Define your nonlinear regression model below. Use x for the independent variable, and a..s for the parameters. Use functions and operators listed in the help documentation.

Bacon-Watts Double-Line
Bent Hyperbola Model
BET Model
Beta Distribution
Cauchy Model
Chapman-Richards Model

CurveExpert 1.4 UNTITLED.DAT

برای برازش تابعی دلخواه باید آن را
 Define a user model در پنجره
 بنویسید. تابع برآزشی در شکل راست
 $y=ax+b/x$ است.

User-Defined Model

Please press the right mouse button for the graphing features menu. Press F1 for help.

S = 0.08161842
r = 0.99536740

Model Information - [User-Defined Model]

User-Defined Model

$y=a*x+b/x$

The parameters for the above model equation are given to the right in the coefficient list.

Coefficients:

a = 2.86686632668E+000
b = 1.05624951249E+000

CurveExpert 1.4 - [UNTITLED.DAT*]

File Edit Data Interpolate Apply Fit Tools Window Help

Define a user model (Alt+AU)

	X	Y
1	0.21	5.6
2	0.34	4.02
3	0.45	3.71
4	0.57	3.59
5	0.78	3.57
6	1.05	4.09
7	1.52	4.97

Define User Model

Enter User Model

Define your nonlinear regression model below. Use x for the independent variable, and a..s for the parameters. Use functions and operators listed in the help documentation.

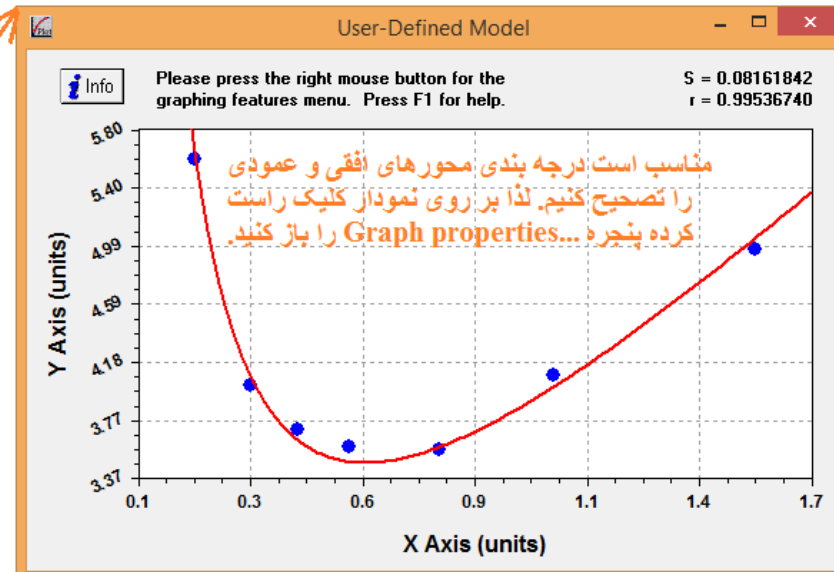
- Bacon-Watts Double-Line
- Bent Hyperbola Model
- BET Model
- Beta Distribution
- Cauchy Model
- Chapman-Richards Model

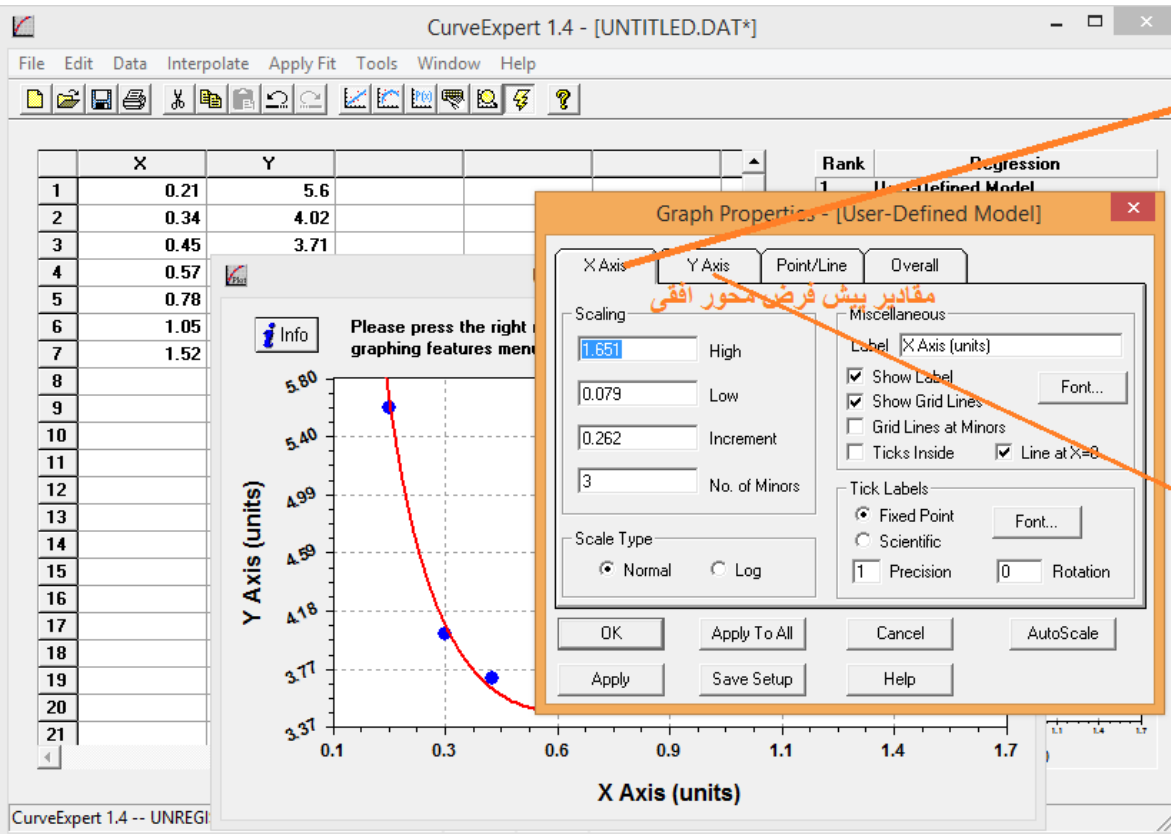
Add Model Remove Model

OK Cancel Help

10 برای برازش تابعی دلخواه باید آن را
11 در پنجره Define a user model
12 بنویسید. تابع برازشی در شکل راست
13 $y=ax+b/x$
14 است.

CurveExpert 1.4 UNTITLED.DAT





Graph Properties - [User-Defined Model]

X Axis Y Axis Point/Line Overall

مقادیر بیش فرض محور افقی

Scaling

1.651 High

0.079 Low

0.262 Increment

3 No. of Minors

Miscellaneous

Label X Axis (units)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside

Line at X=0

Tick Labels

Fixed Point

Scientific

1 Precision 0 Rotation

Scale Type

Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

Graph Properties - [User-Defined Model]

X Axis Y Axis Point/Line Overall

مقادیر اصلاح شده محور افقی

Scaling

1.9 High

0.1 Low

0.2 Increment

4 No. of Minors

Miscellaneous

Label Distance (cm)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside

Line at X=0

Tick Labels

Fixed Point

Scientific

1 Precision 0 Rotation

Scale Type

Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

Graph Properties - [User-Defined Model]

X Axis Y Axis Point/Line Overall

مقادیر اصلاح شده محور عمودی

Scaling

8 High

2 Low

2 Increment

4 No. of Minors

Miscellaneous

Label Period (s)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside

Line at Y=0

Tick Labels

Fixed Point

Scientific

0 Precision 25 Rotation

Scale Type

Normal Log

OK Apply To All Cancel AutoScale

Apply Save Setup Help

eExpert 1.4 - [UNTITLED.DAT*]

Help

Rank Regression

1 User-Defined Model

Graph Properties - [User-Defined Model]

X Axis Y Axis Point/Line Overall

مقادیر بیش فرض محور افقی

Scaling

1.651 High

0.079 Low

0.262 Increment

3 No. of Minors

Miscellaneous

Label X Axis (units)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside Line at X=0

Font...

Font...

Font...

Font...

Scale Type

Normal Log

Fixed Point Scientific

1 Precision 0 Rotation

OK Apply To All Cancel AutoScale

Apply Save Setup Help

0.6 0.9 1.1 1.4 1.7

X Axis (units)

Graph Properties - [User-Defined Model]

X Axis Y Axis Point/Line Overall

مقادیر اصلاح شده محور افقی

Scaling

1.9 High

0.1 Low

0.2 Increment

4 No. of Minors

Miscellaneous

Label Distance (cm)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside Line at X=0

Font...

Font...

Scale Type

Normal Log

Fixed Point Scientific

1 Precision 0 Rotation

OK Apply To All Cancel AutoScale

Apply Save Setup Help

Graph Properties - [User-Defined Model]

X Axis Y Axis Point/Line Overall

مقادیر اصلاح شده محور عمودی

Scaling

8 High

2 Low

2 Increment

4 No. of Minors

Miscellaneous

Label Period (s)

Show Label

Show Grid Lines

Grid Lines at Minors

Ticks Inside Line at Y=0

Font...

Font...

Scale Type

Normal Log

Fixed Point Scientific

0 Precision 25 Rotation

OK Apply To All Cancel AutoScale

Apply Save Setup Help

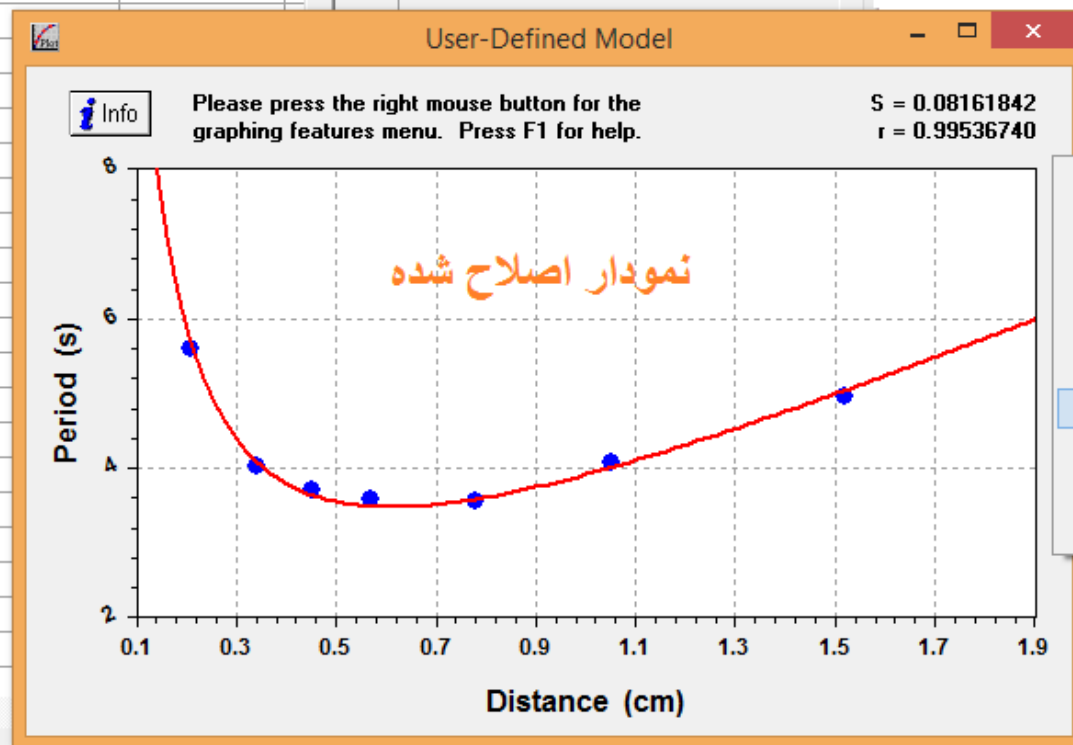
CurveExpert 1.4 - [dat]

File Edit Data Interpolate Apply Fit Tools Window Help

	X	Y
1	0.21	5.6
2	0.34	4.02
3	0.45	3.71
4	0.57	3.59
5	0.78	3.57
6	1.05	4.09
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20		
21		

Rank	Regression
1	User-Defined Model

CurveExpert 1.4 -- UNREGISTERED COPY dat



- Find Main Window
- Graph Properties...
- Information...
- Generate Table...
- Analyze...
- Copy**
- Print...
- Help...
- Close/Exit

شکل نوشتار تابع در نرم افزار در

پنجره Define user model

نیازی به نوشتن $y=$ نیست

تابع

$$y = ax$$

$$a*x$$

$$y = ax^2 + bx$$

$$a*x^2+b*x$$

$$y = \frac{ax + b}{cx + d}$$

$$(a*x+b)/(c*x+d)$$

$$y = ae^{bx}$$

$$a*\exp(b*x)$$

$$y = a\sqrt{bx + c}$$

$$a*\sqrt{b*x+c}$$

$$y = a\sin(2x)$$

$$a*\sin(2*x)$$

$$y = a\sin^2(bx)$$

$$a*\sin(b*x)^2$$

$$y = a\tan(bx + c)$$

$$a*\tan(b*x+c)$$