

ORIGIN INTERFACE	9.1	9	8.6	8.5*	8.1	8	7.5
Smart Hint and Smart Hints Log	✓						
Save Project without Data, Duplicate Workbook or Project without Data	✓						
Plot: User Defined: Menu to Access Customized Templates	√						
File: menu change: Moved Recent Import and Re-Import related Menus below Import menu	√						
Sparkline Improvements (Histogram and Box chart as Sparkline, Log 1 O X and Y support)	√						
Worksheet Long Name with Special Characters	✓						
Worksheet Protection	√						
Add Graphs and Notes as Sheet	√						
Add Multiple Graphs to Layout Together	√						
Linear Referencing (LRS) Numeric Display	✓						
Floating Graphs: Easier Placement of Graphs on Worksheet for creating Reports	√	√					
Display Statistics on Status Bar for Selected Cells	✓	✓	✓				
Improved Data Info Window	✓	✓					
Support Left/Right Split of Project Explorer	√	√					
Easily Add or Remove Buttons from Toolbars	√	✓					
Shift+Alt+3 to Toggle the Script Window	√	✓					
Pause Update of Operation Output by Ctrl+Shift+P	√	✓					
Native 64-Bit and 32-Bit Application	✓	✓	✓				
Auto-Hide Project Explorer Window and Other Dockable Windows	√	✓	√				
New Message Log Window	✓	\checkmark	\checkmark				
Zoom and Pan Inside Graph Layer Using Keyboard or Mouse	√	✓	√				
Navigate Worksheets Dialog to Manage Worksheets in Workbook	✓	✓	✓				
Horizontal and Vertical Dividers to Split Worksheet	√	✓	✓	√			
Zoom and Pan on Graphs, Worksheets, Matrices and Layouts	√	✓	√	√			
Embed and Edit Microsoft Word, Excel and Equation Objects Inside Graphs and Layouts	✓	✓	✓	✓			
Customizable Data Info Display Window	√	√	√	√			
Thumbnail and Metadata Support for Matrix	√	✓	✓	√			
Password Protection for Project, and Audit Log of Project Save with Optional Password Protection	√	√	√	√	√		
Insert Graph into Worksheet Cells	✓	✓	√	✓	✓	✓	

Key Features

Use the following tables to check what new features have been added to Origin, compared to your version.

GRAPH TYPES	9.1	9	8.6	8.5*	8.1	8	7.5
Grouped Column Plots	✓						
Grouped Box Chart	✓						
Variable Column/Bar Width	✓						
100% Stacked Column/Bar Plots	✓						
3D OpenGL Waterfall	✓						
3D Ternary Surface	✓						
Piper/Trilinear Diagram	✓						
Marginal Histogram/Box Chart	✓						
Plot 3D or Contour from Virtual Matrix with Text X and Y values	✓						
3D OpenGL Graphs and Function Plots with Fast Rotation	✓	✓					
3D Surface/Bar Plot From Worksheet XYZ Columns	✓	✓					
3D Parametric Function Plot	✓	✓					
3D Bar Plot with Z Error Bars	✓	✓					
3D Scatter with Projections and Error Bars in X,Y, and Z Directions	✓	✓					
Scatter Matrix Improvement: Group Data Points, Insert Box Plot/ Histogram in Diagonal Cells	✓	✓					
Support Special Point for 3D Scatter Graph	✓	✓					
Improved Polar Graph to Support Negative Numbers/Radius	✓	✓					
Improved Pareto Chart to Combine Smaller Values	✓	✓					
Radar/Spider Chart	✓	✓	✓				
2D/3D Function Plot and 2D Parametric Function Plot	✓	✓	✓				
Error Bar Improvement: Error Bar as Line, as Arc in Polar Graph, Option to Skip Error Bar, etc.	✓	✓	✓	✓			
Contour Profile Plot from Worksheet Data with Uneven Spacing (Virtual Matrix or XYZ Columns)	✓	✓	✓	✓			
3D Vector Plot	✓	✓	✓	✓			
3D Error Bar Plot	✓	✓	✓	✓			
Contour or 3D Plot from Worksheet Data (Virtual Matrix)	✓	✓	✓	✓			
Stock Charts: OHLC-Volume Chart and Japanese Candlestick	✓	✓	✓	✓			
Ternary Contour Plot	✓	✓	✓	✓	✓		
Probability Plot and Q-Q Plot	✓	✓	✓	✓	✓		
Polar Contour Plot	✓	✓	✓	✓	✓	✓	
Image and Contour Profile Plot from Matrix Data	✓	✓	✓	✓	✓	✓	✓



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GRAPH CUSTOMIZATION	9.1	9	8.6	8.5*	8.1	8	7.5
Smart Labels - Auto Position of Data Labels and Leader Lines	√						
User Defined Axis Scale Type	√						
Multiple Axis Breaks and Axis Break with No Gap	✓						
Multiple Special Ticks	✓						
Tick Label Table	√						
Anti-Aliasing on Screen for 2D Graphs	√						
Batch Plotting - Duplicate Graphs by Using Data from Different Sheets	√						
Box Chart Improvements: Outliers in Line, Data on Top of Box, Box Width/Position by Variable	√						
Improved Polar Plot with more Azimuth and Radial Axis Controls	√						
Fill Area Between Two Line Plots	√						
Customized Color/Shape/Interior Increment List for plot	√						
Isometric - Link Axis Length to Scale	√						
Akima and Modified Bezier Line Connection	√						
Data Labeling for 3D Bars	✓						
Colormapped Contour Lines	√						
Edit Range and Axis Breaks support in 3D Graph	√						
Merge Graphs: Treat Each Source Graph as a Unit and Add Labels	√						
Manually Move 3D Planes Along the Axis Direction	✓	✓					
Flatten and/or Shift 3D Surface in Z Direction by Percent of Scale Range	✓	✓					
Intersecting Surface from different X or Y	√	✓					

GRAPH CUSTOMIZATION	9.1	9	8.6	8.5*	8.1	8	7.5
3D Surface Improvements: Lighting Effect, Mesh	√	√					
Move, Rotate and Resize 3D Graphs in an intuitive way	√	√					
Legend Improvement: Combination of Substitution Notations and Hide/ Show Data Plot Directly	√	√					
Use the Context Menu to Quickly Change the X/Y Data for 2D Data Plots	√	✓					
Support Clockwise/Counter Clockwise Ternary Plots	√	√					
Order Stacked Columns/Bars in Stacked Column/Bar Plot	√	√					
New Axis Dialog for 3D Graphs	√	√					
Add Vertical or Horizontal Lines with Labels in 2D Graph Layers	√	√					
"Insert Info Variable" Supports Plot Index	√	√					
More Label Options for Annotation Tool	√	✓					
Scale Distribution Curve for Histogram Plot, as % of Tallest Bar	√	✓	✓				
Output Distribution Curve Data and Parameters to Bin Worksheet for Histogram Plot	√	√	✓				
New Layer Contents Dialog	√	√	✓	✓			
Axis Tick Locations from Dataset	√	√	√	√			
Color Palette Improvements	√	√	√	√			
Legend Improvements	√	√	✓	✓			
Support for Nonlinear X and Y Axes, such as Log Axes, for 3D Surface and Contour Plots	√	√	✓	✓			
Transparency and Gradient Fill Control for Graph Objects	√	√	√	√			
Non-Linear Z-Axis and Y- and Z-Value Colormap Support for Waterfall Plots	√	√	√	√			
Ternary Plot with Flexible Scale	√	√	✓	✓			
Multiple Intersecting Surfaces in 3D Graphs	√	✓	✓	✓			



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GADGETS	9.1	9	8.6	8.5*	8.1	8	7.5
2D Integration Gadget	PRO						
Global Vertical Cursor Gadget Across Graphs	√	√					
Vertical Cursor Gadget	√	√	✓				
Intersect Gadget	✓	✓	✓				
Quick Sigmoidal Fit Gadget	✓	✓	✓				
Cluster Gadget	PRO	PRO	PRO	PRO			
Quick Peaks Gadget	√	√	√	√			
Statistics Gadget Improvement	✓	√	✓	✓			
Differentiate Gadget	✓	√	✓	✓			
Interpolate Gadget	✓	√	√	√			
Quick Fit Gadget	√	√	✓	√	✓		
Rise Time Gadget	PRO	PRO	PRO	PRO	PRO		
Integrate Gadget	√	✓	✓	√	✓		
FFT Gadget	√	√	√	√	√		
Statistics Gadget	√	√	√	√	√		
IMPORTING	9.1	9	8.6	8.5*	8.1	8	7.5
Importing OPJ	✓						
Import MAT File Structure	✓						
Import SPC file in 64-bit	✓						
Transpose Data and Skip Columns in ASCII Import	✓						
Specify Channel When Importing MDF, NITDM, DIADem, Prism, pClamp, Matlab data files	✓	✓					
File Import Menu Customization Dialog	✓	✓	✓				
Digitizer Tool	✓	✓	✓	✓			
SQL Editor for Database Import	✓	✓	✓	✓			
Import Multiple Images into the Same Matrix Sheet	✓	✓	✓	✓			
Import Data in Unicode ASCII, CDF, and HDF5 Formats	✓	✓	✓	✓	✓		
Import Excel, Multi-Line CSV and Binary 2D Array	✓	✓	✓	✓	✓	✓	
3rd Party Formats Support for pCLAMP 2.0, NI DIAdem/TDM, ETAS MDF, JCAMP-DX, NetCDF, etc.	✓	✓	✓	✓	✓	✓	
Graphically Construct SQL Queries	✓	✓	✓	✓	✓	✓	
ASCII and Binary Import Wizard Provides Visual Feedback during Import	√	√	✓	√	√	√	√
Drag-and-Drop Data File from Windows Explorer into Origin	✓	✓	✓	√	✓	✓	✓

EXPORTING	9.1	9	8.6	8.5*	8.1	8	7.5
Send Graphs to a Specified Powerpoint Template/File	✓						
Creating Movies from Origin Windows using GUI Tool or Script	✓	✓					
Graph Export Supports Transparency for PDF and EPS Format	✓	✓	√	✓			
Export All Graphs to PowerPoint	✓	✓	✓	✓	✓		
Export Worksheet as Multi-Page PDF Document	✓	✓	✓	✓	✓		
Export ASCII Data to Existing File by Appending or Replacing	✓	✓	✓	√	✓		
Slide Show Graphs and Layouts	✓	✓	✓	✓	✓		
Export Worksheet as Image File	✓	✓	✓	✓	✓	✓	
Export Workbook as NI TDM/TDMS File	✓	✓	✓	✓	✓	✓	
Export Worksheet as Wave File	✓	✓	✓	✓	✓	✓	
Graph Export Formats Include: AI, CGM, EPS, TIFF, PDF, JPEG, EMF, PSD, etc.	✓	✓	✓	✓	✓	✓	✓
Export Image to Raster File Format	√	✓	√	√	√	✓	√
DATA MANIPULATION	9.1	9	8.6	8.5*	8.1	8	7.5
F(x) Column Label row for Formula	✓						
Set Multiple Column Values	✓						
Sort Column by Values in Column Label Rows	✓						
Reduce Columns	✓						
Generate Patterned Data	✓						
Lock Filter Condition in Copied Columns from Worksheet with Filter	✓						
Data Filter: Easy and Quick Tool for Data Reduction	✓	✓					
Split a Worksheet into Multiple Worksheets by Number of Columns/ Rows, or by Column Label	✓	✓	✓				
Pivot Table Improvements	✓	✓	✓	✓			
Stack Columns and Unstack Columns Improvements	✓	✓	✓	✓			
XYZ Gridding in Logarithmic Scale	✓	✓	✓	✓			
Reduce XY Data by Group, Reduce Data to Evenly Spaced X	PRO	PRO	PRO	PRO	PRO		
Reduce Duplicate X Data, Reduce Data by Skipping Every N Points	√	√	√	√	√		
New Find and Replace Tool for Numeric and Text Values	√	√	√	√	✓		
Trim Missing Values in Worksheet	√	√	✓	✓	✓	√	
Convert Table-Like Data into XYZ Columns	✓	√	✓	√	✓	√	
Worksheet Query (Extract Values from Worksheet)	✓	√	√	√	√	√	



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GENERAL ANALYSIS	9.1	9	8.6	8.5*	8.1	8	7.5
Copy & Paste Operation for Fitting Tools	√						
Copy & Paste Formula between Columns	√						
Gadgets: Batch Analysis	√						
Set Numeric Settings for Report	√						
Analysis on Virtual Matrix based Plot	✓						
Support Data With Y Error in Batch Processing	√	✓					
User Defined Data Identifier in Report Sheets	✓	✓					
Repeat Analysis on All Plots in Graph or All Columns in Worksheet	√	√	√				
Batch Processing with Summary Report Using Analysis Templates™	√	√	√	√	√		
Batch Peak Fitting of Multiple Datasets Using Peak Analyzer Theme	PRO	PRO	PRO	PRO	PRO		
Generate LabTalk Script Command from Current Dialog Settings	✓	√	√	√	√		
Compare Settings in Two Themes and List Differences	√	√	√	√	√		
Analysis Templates™ with Custom Report Sheets for Repeat Analysis	√	√	√	√	√	√	
Consolidated Reports with Collapsible Tables	√	√	✓	√	√	√	
Theme Support for Saving Dialog Settings	√	√	✓	√	✓	✓	
Recalculation of Results on Data or Parameter Change	√	√	✓	√	√	√	
Customize Graphs in Report Sheet	√	√	√	√	√	√	
Run Analysis with Theme Settings Without Opening Dialog	✓	✓	√	√	√	✓	

CURVE FITTING	9.1	9	8.6	8.5*	8.1	8	7.5
Fit and Rank All Functions in a Category	PRO						
Custom X Values for Fitted Curve	√						
Orthogonal Regression for Explicit Functions	PRO	✓					
BIC Test for Model Comparison	PRO	√					
Orthogonal Regression for Implicit Functions	PRO	PRO					
Support Confidence Interval for Find- X/Find-Y Tool	√	√					
Nonlinear Fit with Integral Function	√	√	√				
dependent Fit Improvements	√	√	√				
Calulate Standard Error for Derived Parameter	√	√	√				
Linear Fit with Support for X Error	PRO	PRO	PRO				
Surface Fit with Multiple Peaks	PRO	PRO	PRO	PRO			
New Fitting Function Builder for Fit- ting Function Creation	✓	√	√	√			
Rotated 2D Gaussian Function for 2D Surface Fitting	PRO	PRO	PRO	PRO	PRO		
Partial Leverage Plot in Multiple Regression	√	√	√	√	√		
Improved Residuals Analysis with Additional Residuals Plots	✓	√	√	√	√		
Improved Find-X/Find-Y Tool for Linear, Polynomial, and Nonlinear Fit	✓	√	√	√	√		
New Find-Z Tool for Nonlinear Surface/Matrix Fit	PRO	PRO	PRO	PRO	PRO		
Fitting Comparison	PRO	PRO	PRO	PRO	PRO	PRO	PRO



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PEAK ANALYSIS	9.1	9	8.6	8.5*	8.1	8	7.5
More Baseline modes in Peak Analyzer: Straight Line, Use Script and Use Existing Dataset	√						
Add More Baseline and Peak Finding Methods	√	√	√				
Multiple Peak Fit Tool Improvements	√	✓	√	✓			
Improved Peak Analyzer Wizard	✓	✓	✓	✓	√		
Batch Peak Fitting	PRO	PRO	PRO	PRO	PRO		
Peak Analyzer: Fit Individual Peaks with Different Fitting Functions	PRO	PRO	PRO	PRO	PRO	PRO	
Peak Analyzer: Fit Baseline with Peaks	PRO	PRO	PRO	PRO	PRO	PRO	
Peak Analyzer: Peak Fitting	PRO	PRO	PRO	PRO	PRO	PRO	
Peak Analyzer: Peak Integration	✓	√	√	√	√	✓	
Peak Analyzer: Peak Finding	✓	√	√	√	√	✓	
Peak Analyzer: Baseline Subtraction	√	√	✓	√	✓	✓	
Peak Analyzer: Baseline Detection	√	√	√	√	√	√	
SIGNAL PROCESSING	9	8.6	8.5.1	8.5	8.1	8	7.5
LOWESS and LOESS Smoothing	✓						
IIR Filter Design	PRO	PRO					
2D FFT Filter	PRO	PRO	PRO	PRO			
Signal Envelope	PRO	PRO	PRO	PRO	PRO		
Signal Decimation to Reduce/Resample Data	PRO	PRO	PRO	PRO	PRO		
Coherence	PRO	PRO	PRO	PRO	PRO		
1D FFT, Inverse FFT and 1D FFT Filter	✓	✓	✓	✓	✓	✓	
2D FFT and 2D Inverse FFT	PRO	PRO	PRO	PRO	PRO	PRO	
Short-Time Fourier Transform (STFT)	PRO	PRO	PRO	PRO	PRO	PRO	
Wavelet Analysis: 1D and 2D Decompose, 1D and 2D Recon- struction, Smooth, De-Noise, and Continuous Wavelet Transform	PRO	PRO	PRO	PRO	PRO	PRO	
Hilbert Transform	PRO	PRO	PRO	PRO	PRO	PRO	
2D Correlation	PRO	PRO	PRO	PRO	PRO	PRO	

STATISTICS	9.1	9	8.6	8.5*	8.1	8	7.5
Partial Least Squares Regression	PRO						
One/Two-Proportion Testing	PRO						
More Power & Sample Size Tests(One/Two-Proportion, One/Two Variance)	PRO						
Weibull Fit: Show Probability Plot with Confidence Limits	PRO						
More Distance Measures for Hierarchical Cluster Analysis	PRO	PRO					
Grubbs Test and Q-test to Detect Outliers	✓	✓					
Multivariate Analysis: Principal Component Analysis, Cluster Analysis, Discriminant Analysis, Canonical Discriminant Analysis	PRO	PRO	PRO				
Raw and Indexed Data Support for More Statistics Tools	✓	✓	✓				
Cutoff Value and Test Direction are Added for ROC Curve	PRO	PRO	PRO				
More Normality Test Methods: Anderson-Darling, D'Agostino-K Squared, and Chen-Shapiro	✓	✓	✓				
Significance Level Support for Most of the Statistics Tools	PRO	PRO	PRO	PRO			
Support for Periodic Data in 2D Binning	✓	√	✓	✓	✓		
Survival Analysis: Kaplan-Meier Estimator, Cox Proportional Hazard Model, Weibull Fit, Test Equality of Survival Functions (Log-Rank, Breslow and Tarone-Ware)	PRO	PRO	PRO	PRO	PRO	PRO	
Nonparametric Tests: Sign Test, Wilcoxon Test for One Sample and Paired Sample, Two Sample Kolmogorov-Smirnov Test, Mann- Whitney Test, Kruskal-Wallis ANOVA, Mood's Median Test, Friedman ANOVA	PRO	PRO	PRO	PRO	PRO	PRO	
Power and Sample Size (One, Two and Paired-Sample +Test, One Way ANOVA)	PRO	PRO	PRO	PRO	PRO	PRO	
One Way ANOVA, Two Way ANOVA	✓	✓	✓	✓	✓		
One Way and Two Way Repeated ANOVA	PRO	PRO	PRO	PRO	PRO	PRO	
Hypothesis Testing: One Sample and Two-Sample t-Test, Pair-Sample t-Test, Welch Corrected t-Test	✓	✓	✓	✓	✓		
Hypothesis Testing: One Sample and Two Sample Hypothesis Tests for Variance	PRO	PRO	PRO	PRO	PRO	PRO	
ROC Curve	PRO	PRO	PRO	PRO	PRO	PRO	
Correlation Coefficient and Discrete Frequency	PRO	PRO	PRO	PRO	PRO	PRO	
Basic Descriptive Statistics	✓	√	✓	✓	✓	✓	✓
1D and 2D Frequency Count	✓	√	✓	✓	✓	✓	✓
Normality Test	√	√	✓	✓	√	√	√



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MATHEMATICS	9.1	9	8.6	8.5*	8.1	8	7.5
Akima Spline in Interpolation	√	-	0.0	0.5	0.1		7.5
Insert Range Variable/Column Label Cell by Selection in Set Column/ Matrix Values Dialog	√	√					
More Functions in Set Column/ Matrix Values Dialog	√	√	√				
Compute Polygon Area	✓	✓	✓	✓			
Compute Surface Area and Matrix Area	PRO	PRO	PRO	PRO	PRO		
Normalization Across Multiple Columns or Curves		✓	✓	✓	✓		
3D Interpolation	PRO	PRO	PRO	PRO	PRO	PRO	
1D Interpolation and Extrapolation	✓	✓	✓	✓	✓	✓	
Interpolation and Extrapolation of Y From X	✓	✓	√	√	√	✓	
Trace Interpolation on XY Data	PRO	PRO	PRO	PRO	PRO	PRO	
Trace Interpolation on XYZ Data	✓	✓	✓	✓	✓	✓	
2D Interpolation and Extrapolation	PRO	PRO	PRO	PRO	PRO	PRO	
2D Volume Integration	PRO	PRO	PRO	PRO	PRO	PRO	
Set Column or Matrix Values by Using Mathematics Operations	✓	√	√	√	√	✓	✓
IMAGE HANDLING	9.1	9	8.6	8.5*	8.1	8	7.5
Image Crop, Rotate, Flip, Shear, Resize, Offset, Auto Trim	✓	✓	✓	✓	✓	✓	
Spatial Image Filter (Average Filter, Gaussian Filter, Median Filter, Noise, Sharpen, Edge Detect)	✓	√	✓	✓	✓	✓	
User-Defined Spatial Image Filter							
osor Dennica Spanar image Filler	PRO	PRO	PRO	PRO	PRO	PRO	
Image Conversion: Image to Data, Color Image to Grayscale, Data to Image, Binary and Auto Binary	PRO ✓	PRO ✓	PRO ✓	PRO ✓	PRO ✓	PRO ✓	
Image Conversion: Image to Data,	√	√	√	√	PRO PRO	√	
Image Conversion: Image to Data, Color Image to Grayscale, Data to Image, Binary and Auto Binary	√	√	√	√	√	√	
Image Conversion: Image to Data, Color Image to Grayscale, Data to Image, Binary and Auto Binary RBG Merge and RBG Split for Image Image Adjustment: Brightness, Contrast, Gamma, Hue, Saturation, Histogram Contrast, Histogram	PRO	PRO	PRO	PRO	√	PRO	
Image Conversion: Image to Data, Color Image to Grayscale, Data to Image, Binary and Auto Binary RBG Merge and RBG Split for Image Image Adjustment: Brightness, Contrast, Gamma, Hue, Saturation, Histogram Contrast, Histogram Equalization, etc. Image Math: Alpha Blend, Pixel Logic, Replace Background, Subtract Background, Subtract Interpolated	PRO PRO	PRO PRO	PRO PRO	PRO PRO	PRO	PRO PRO	
Image Conversion: Image to Data, Color Image to Grayscale, Data to Image, Binary and Auto Binary RBG Merge and RBG Split for Image Image Adjustment: Brightness, Contrast, Gamma, Hue, Saturation, Histogram Contrast, Histogram Equalization, etc. Image Math: Alpha Blend, Pixel Logic, Replace Background, Subtract Background, Subtract Interpolated Background, etc.	PRO PRO PRO	PRO PRO PRO	PRO PRO	PRO PRO	PRO PRO	PRO PRO PRO	

WORKING WITH EXCEL	9.1	9	8.6	8.5*	8.1	8	7.5
Import or Open XLS/M File (Excel with Macro)	✓	✓	✓				
Maintain Cell Formats When Importing Excel File	√	✓	√	✓	√	√	
Import or Open XLSX File		√	✓	✓	√	√	
Set Column Designations When Importing Excel File		√	√	√	√	√	
User-Defined Maximum Number of Empty Columns When Importing Excel File	√	√	√	✓	✓	√	
Convert Excel Column Headers into Origin Column Headers	√	√	√	✓	√	√	
Link to External Excel File for Relative Path to Project Path	√	✓	√	✓	√	✓	
Open XLS File Inside Origin	√	√	✓	✓	√	√	✓
Plot from XLS Sheet Inside Origin	√	√	✓	✓	√	√	✓
Save Excel File as External/Internal File of the Project		√	√	√	√	√	✓
CONNECTIVITY W/ OTHER APPLICATION							
CONNECTIVITY W/ OTHER APPLICATION	9.1	9	8.6	8.5*	8.1	8	7.5
CONNECTIVITY W/ OTHER APPLICATION Mathematica Link for Data Exchange Between Origin and Mathematica	9.1	9	8.6	8.5*	8.1 ✓	8	7.5
Mathematica Link for Data Exchange	9.1	9		8.5*	8.1	8	7.5
Mathematica Link for Data Exchange Between Origin and Mathematica MATLAB® Console with GUI Support to Transfer Data	9.1	9 ✓ ✓		8.5*	8.1 ✓	8 ✓	7.5
Mathematica Link for Data Exchange Between Origin and Mathematica MATLAB® Console with GUI Support to Transfer Data Between Origin and MATLAB®	9.1	9 ✓		8.5 * ✓	8.1 ✓ ✓	8 ✓ ✓	7.5 ✓
Mathematica Link for Data Exchange Between Origin and Mathematica MATLAB® Console with GUI Support to Transfer Data Between Origin and MATLAB®	9.1	9 ✓ ✓		8.5 * ✓	\$.1 ✓	8✓✓	7.5 ✓



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PROGRAMMING	9.1	9	8.6	8.5*	8.1	8	7.5
Code Builder has New Editor based on Scintilla Code, which supports, among other things, Code Folding	✓	√					
Origin C: Access to Full NAG Mark 9 Library	✓	✓					
LabTalk: Support for User-Defined Function	✓	✓	√	√	✓		
LabTalk: Support for Event-Triggered Script Execution	✓	✓	✓	✓	✓		
LabTalk: Data Types Include Integer, Double, Constant, Range, String, Dataset, Function and Tree	√	√	√	√	√	√	
X-Function: Easy Creation of Custom Tools with Automatic GUI by X-Function	✓	√	✓	✓	√	✓	
X-Function: Execute X-Function from LabTalk Script and Menu	✓	√	√	✓	√	✓	
Command Window: Auto-Complete Support for Scripting	√	√	√	√	√	√	
Developer Kit: Run Tools and Wizards Created with Microsoft Visual C++	√	√	√	√	√	√	
Origin C: Create Custom Dialog for Your Routine	√	√	✓	✓	√	✓	✓
Origin C: User-Defined Class Support	✓	✓	√	√	✓	√	✓

