ORIGINPRO® 2022
The Ultimate Software for Graphing & Analysis

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

PROJECT MANAGEMENT	2022	2021*	2020*	2019*	2018*	9.*
Add System Template to Template Library	✓					
Provide Sample Project for System and Extended Templates	✓					
Apply Color to Sheet Tab	✓					
New Image Window for Flexible Image Handling in Origin	✓					
New Book Browser Dialog to Organize and Manage User-defined or Extended Workbook and Matrix Templates.	✓	✓				
Keep last autosaved project file Last-AutoSave.opju	✓	✓				
More Social and Resources are Added in Main Menu	✓	✓				
Object Manager for Workbook Window	+	✓	✓			
Preview and Thumbnail of Workbooks and Matrices in Windows Explorer and Project Explorer	✓	✓	✓	+	✓	
Backup Folder and Individual Backup File for Each Project for Recovery	✓	✓	✓	✓	✓	
Save Files to or Open Files from Google Drive	✓	✓	✓	✓	✓	
Automatic Audit Log for All Newly Created Projects	✓	✓	✓	✓	✓	
New Project File Structure (OPJU) with Significant Improvement in Project Size	✓	✓	✓	✓	✓	
Unsaved Projects Auto Saved for 7 days	✓	✓	✓	✓	✓	
Graph Preview, Comments Tooltip in Project Explorer	✓	✓	✓	✓	✓	

PROJECT MANAGEMENT (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Find String anywhere in Project	✓	✓	✓	✓	✓	
Updated Template Library to Access and Manage Extended and User-defined Graph Templates	+	+	+	+	✓	✓
Lock Worksheet	✓	✓	✓	✓	✓	✓
Project Explorer Support for Left/Right Split of Panels	✓	✓	✓	✓	✓	✓
Auto-Hide for Project Explorer and other Dockable Windows	✓	✓	✓	✓	✓	✓
Password Protection for Project/Worksheet/Files, and Audit Log of Project Save with Optional Password Protection	✓	✓	✓	✓	+	+
Project Explorer Add Window Shortcut to Favorites Folder	✓	✓	✓	✓	✓	✓
Add Comment to Origin Window/Folder	✓	✓	✓	✓	✓	✓
Project Explorer(PE) to Help Organize Origin Data	✓	✓	✓	+	+	✓

BATCH PROCESSING	2022	2021*	2020*	2019*	2018*	9.*
Support Modify Row Range Of Input Data During Batch Process	✓					
Duplicate the Selected Operation for Easier Result Comparison	✓	✓				
Support PaUsing Auto Update/Recalculation	✓	✓				
Support Clone Import for Data Connectors	✓	✓				
Batch Plotting Support Inexact Data Match and Column Offset Mode	✓	✓				

9.* is for Origin versions 9.0 and 9.1 | 20XX* is for versions 20XX and 20XXb | +: Feature was improved in the version

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BATCH PROCESSING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Reprocess & Update Buttons on Batch Processing Summary Sheet to Allow Changes to Template or Input Data	✓	✓	✓			
Batch Peak Analysis Improvements: Recalculation Support, Sort Output Sheet by Peak Index, Auto Pick All Plots in an Active Graph Window	✓	✓	✓			
Combine All Word Files into One File After Batch Processing	✓	✓	✓			
Clone Current Project	✓	✓	✓	✓		
Support Excluding Specified Operation when Click Recalculate Button	✓	✓	✓	✓		
Support to Add Data from Many Sheets/Books into a Combined Graph or an Existing Graph in Batch Plotting	✓	✓	✓	✓	✓	
Allow Importing Data Directly into Embedded Matrix in Worksheet when Performing Batch Processing	✓	✓	✓	✓	✓	
Smart Plotting with Cloneable Graph Templates	✓	✓	✓	✓	✓	
Clone Workbook/Worksheet during Import for Batch Procesing	✓	✓	✓	+	✓	
Word Template for Report Creation in Batch Process	✓	✓	✓	✓	✓	
Duplicate Workbook/Sheet Without Data	✓	✓	✓	✓	✓	✓
Batch Plotting - Duplicate Graphs Using Data from Different Sheets/Columns/Matrices	✓	+	✓	✓	+	✓
Generate Gadget Output for All Data Plots in the Graph	✓	✓	✓	✓	✓	✓

BATCH PROCESSING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Copy & Paste Formula and Labels between Columns	✓	✓	✓	✓	✓	✓
Copy & Paste Fitting Operation	✓	✓	✓	✓	✓	✓
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	PRO

EASE OF USE	2022	2021*	2020*	2019*	2018*	9.*
Simpler Dialog and Operations for Graph Copy Paste	✓					
Simpler "Find" Tool	✓					
Eyedropper on Select Color Control to Pick Color on Screen	✓					
Quickly Return to Last Active Window in Project	✓					
Mini Toolbar Additions: Data Highlighter, Add Secondary Axis, Control Reference Lines, Object Manager	✓					
Object Manager Additions: Select Multiple Plots to Edit Together, Manage Graph Objects, Support Layout Windows	✓					
Graph Annotator to Manually Add Annotated Data Points In Graph	✓					
Status Bar, More Info: Masked/Unmasked Counts, Matrix ROI Stats, Image Coordinates, Linked Image File Path	✓					
Intellisense Code Completion when Working with Python	✓	✓				

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EASE OF USE (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
New Plot Highlight Mode on Mouseover	✓	✓				
Data Slicer for Filtered Data Plots	✓	✓				
Mini Toolbar: 3D Graphs, Add Linear Fit Curve, Asterisk Bracket, Text Label, Legend, Color Scale, Column Label Row and Tick Labels	✓	✓				
Undo Support of Deleted Graph Windows	✓	✓				
Easier Color Editing and Management, Support Palettes of Other Software	✓	✓				
Excel-Like Formula Bar	✓	✓				
Mask tool Support for 3D Graphs	✓	✓				
Data Highlighter support for 3D Graphs	✓	✓	✓			
Object Manager: Reverse Plot Order for Graph, Select Multiple Sheets for Workbook	✓	✓	✓			
Replace Plot X or Y with Column from Other Worksheet	✓	✓	✓			
More Plot-type Options for Insert > Plot to Layer	✓	✓	✓			
Mini Toolbar for Easy 2D Graph and Worksheet/Matrix Customization	✓	✓	✓			
Copy Paste Data Plots between Graph Layers	✓	✓	✓			
Compact Popup for Font and Line Format	✓	✓	✓			
Add a Find Apps… Menu Under Fitting, Peak Analysis, and Statistics menu	✓	✓	✓			
HTML/Markdown-based Reports for Repeat Analysis and Publishing	✓	✓	✓	✓		
Font Control for Notes Window	✓	✓	✓	✓		

EASE OF USE (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Reorganized Plot Menu with More Appealing Icons	+	✓	✓	✓		
Most-Recently Used Fonts Availble in Font Control	✓	✓	✓	✓		
Improving Group Folder Sharing with Better Support for Multiple Groups	✓	✓	✓	✓		
Windows-like Search	✓	✓	✓	✓		
Support Numeric Units, pi, km, % etc in Worksheet and Graph	✓	✓	✓	✓		
Data Point Tooltip: Mouse over Data Points in Graph to View Useful Information of Data Point	✓	✓	✓	✓		
Data Highlighter: Highlight Data Points in all Open Graphs that Originate from Same Row of Worksheet	✓	✓	+	✓		
Plot Highlighting: Highlight Data Plot in Graph, other Plots Fade Away, Corresponding Worksheet Column is Highlighted	✓	+	✓	✓		
Enhanced Master Page	✓	✓	✓	✓	✓	
New Fit Layers to Page and Set Scale Factor to Adjust All Layers to Have Tight Fit to Page	✓	✓	✓	✓	✓	
Customize Properties Across Graph Layers	✓	✓	✓	+	✓	
Active Window Indicator	✓	✓	✓	✓	✓	
Enlarged Graph Using Scale-in Tool Supports Multiple Overlapped Layers	✓	✓	✓	✓	✓	✓
Enhanced Custom Formatting to Support Displaying Numbers in Percent, Fractions, Degrees etc.	✓	✓	✓	✓	✓	✓
App Center for Easy APP Access and Maintenance	✓	✓	✓	✓	+	✓
Version-independent Folders for UFF, Licensing, Autosave etc, For Easier Migration to Future Versions	✓	✓	✓	✓	✓	✓

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EASE OF USE (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Several Pre-installed Apps for Publishing and Curve Fitting	✓	+	✓	✓	✓	
Enter Unicode Character by Typing Code and Pressing ALT+X	✓	✓	✓	✓	✓	
Ignore Hidden Ccolumns/Plots From Analysis	✓	✓	✓	✓	✓	
Customize Default Digits for Analysis Output in Each Analysis Tool	✓	✓	✓	✓	✓	
Learning Center Dialog which Helps User to Get Start from Origin	✓	✓	✓	✓	+	
Mouse Hover Data Plot to Show Tooltip	✓	✓	✓	✓	✓	
Switching Layers in Axis dialog	✓	✓	✓	✓	✓	
Provide Option to Use English in Analysis Report	✓	✓	✓	✓	✓	
Better Color Control to Pick more Colors and Define Custom Colors	✓	✓	✓	✓	+	
Object Manager to Easily Arrange Plots and Layers	+	✓	+	✓	✓	
Apps Gallery for Managing Apps Installed from File Exchange	✓	✓	✓	+	✓	
Improve Curve Fitting and Statistics Dialogs to be Tab-based for Easy Navigation	✓	✓	✓	✓	✓	
Collapsible Menus and Context Menus	✓	✓	✓	✓	✓	
F(x) Column Label Row for Column Formula	✓	✓	✓	✓	✓	✓
Set Multiple Column Values	✓	✓	✓	✓	✓	✓
Copy, Paste and Apply Graph Format and Theme	✓	✓	✓	✓	✓	✓
Analysis Templates™ with Custom Report Sheets for Repeat Analysis	✓	✓	✓	+	✓	✓
Consolidated Reports with Collapsible Tables	✓	✓	✓	✓	✓	✓
Save Analysis Dialog Settings as Theme for Future Use	✓	✓	✓	✓	✓	✓
Recalculation of Results on Data or Parameter Change	✓	✓	✓	✓	✓	✓

GRAPH TYPES	2022	2021*	2020*	2019*	2018*	9.*
Pie Map	✓					
Ridgeline Chart	✓					
Sunburst Plot	✓					
Grouped Floating Bar	✓					
New Add-on Graph Templates for Download:XPS Area; Waterfall with Inset; Grouped Circular Bars; Tripartite Plot; Bar with Connected Lines; Grouped Pyramid Plot; Cluster Plot with Confidence Ellipse etc.	✓					
Network Plot	✓	✓				
Stiff Diagram and Stiff Map, Durov Plot	✓	✓				
Ribbon and 100% Ribbon Chart	✓	✓				
Parallel/Alluvial Plot from Summarized Data	✓	✓				
Extended Graph Templates: Ellipse Plot, Error Rectangle Plot, Ternary Phase Diagram, 3D Bars in Two Planes, Anomaly Line Plot & Anomaly Plot, Arrow Plot, Corner Difference Histogram, Schoeller Diagram, etc.	✓	✓				
Chord Diagram	✓	✓				
Lollipop Plot	+	✓				
Stack Browser Graph	✓	✓				
Polar Vector Plot, Compass Plot	✓	✓				
Browser Graph in Window View	✓	+	✓			
Streamline Vector Plot	✓	✓	✓			
Beeswarm Plot	✓	✓	✓			
XYY 3D Side-by-Side Bars	✓	✓	✓			
Radial Plot, Stacked Radial Plot	✓	✓	✓			
Bland-Altman Plot	✓	✓	✓			

GRAPH TYPES (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Bullet Chart, Normalized Bullet Chart	✓	✓	✓			
Donut Charts and Improved Pie Charts	✓	+	✓			
Sankey and Alluvial Diagram	+	+	✓			
Kite Diagram	✓	✓	✓			
Density Dots and Color Dots for Large Data	✓	✓	✓			
Before - After Plot	✓	✓	✓			
Population Pyramid	✓	✓	✓			
Rug Plots	✓	✓	✓	✓		
3D Parametric Plot	✓	✓	✓	✓		
XY and XYZ Heatmap, Split Heatmap, Heatmap with Labels	✓	✓	✓	✓		
Parallel Plot	✓	✓	✓	✓		
Violin Plot	✓	✓	✓	✓		
Cluster Plot	✓	✓	✓	✓		
Row-wise Line Series with Error Bars	✓	✓	✓	✓		
Tetrahedral Scatters/Lines/Line+Symbols	✓	✓	✓	✓		
Stacked Histogram	✓	✓	✓	✓		
Contour with Categorical Z Values	✓	✓	✓	✓		
Trellis Plot: Double Y, Stacked Column, 100% Stacked Column and Box Chart	✓	✓	✓	+	✓	
Bridge Chart (McKinsey-Style Waterfall)	✓	✓	✓	✓	✓	
Double Y Box Chart.	✓	✓	✓	✓	✓	
Multi-Y Color Mapped Line Series	✓	✓	✓	✓	✓	
4D XYZ Surface with Custom Boundary	✓	✓	✓	✓	✓	

GRAPH TYPES (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Teillis Plot with Flexible customization options: Wrap Panels, Overlap Panels, Add Gap between panels	✓	✓	✓	✓	✓	
Line Series, Statistics Bars	✓	✓	✓	✓	✓	
3D Stacked Bars, 100% 3D Stacked Bars with new Bar Shapes	✓	✓	✓	✓	✓	
Interval Plot	✓	✓	✓	✓	✓	
Heatmap	✓	✓	+	+	✓	
Column Scatter Plot With or Without Jitter	✓	✓	✓	✓	✓	
Kernel Density Plot	✓	✓	✓	✓	✓	
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 Plot (Histogram, Box, Distribution)	✓	+	✓	✓	✓	✓
3D Surface/Bar Plot From Worksheet XYZ Columns	✓	✓	✓	✓	✓	✓
3D Bar Plot with Z Error Bars	✓	✓	✓	✓	✓	✓
3D Parametric Function Plot	✓	✓	✓	✓	✓	✓
Radar/Spider Chart	+	✓	✓	✓	✓	✓
2D/3D Function Plot and 2D Parametric Function Plot	+	✓	✓	✓	✓	✓
Multiple Intersecting Surfaces	✓	✓	✓	✓	✓	✓
3D Vector Plot	✓	✓	✓	+	✓	✓
3D Bar Plot	✓	✓	+	✓	✓	+
Image/Contour Profile Plot	+	✓	✓	✓	✓	✓
Scatter Matrix	✓	+	✓	✓	✓	✓
Contour Plot	+	✓	✓	✓	✓	+
Basic 2D, 3D, and Statistics Graphs	✓	✓	+	✓	✓	✓

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GRAPH CUSTOMIZATION	2022	2021*	2020*	2019*	2018*	9.*
Use Image File/Clipboard Image as User-defined Symbol in Scatter Plot	✓					
3D Bar Improvements: Support Fill Pattern, Support Bar from Top Plane	✓					
Data Tooltip Support for 3D Graphs	✓					
Gradient Fills For Drawing Objects Such As Rectangle And Circle	✓					
Inserting Image Improvements: Crop, Clip, Rotate Inserted Image In Graph, Edit Inserted Images, Set Image Coordinate, Set Layer Scale to Match Inserted Image Coordinates, Support Images with Transparent Background (SVG, PNG)	✓					
New Arrange Layer Tool to Change Graph to M x N Layers	✓					
Enhance Grid Setting for Precise Reposition of Layers and Objects	✓					
Centroid And Subset Support for Line And Symbol Plot	✓					
Support Wrap Text And Drag to Resize Individual Row Height in Axis Tick Table	✓					
Vertical Writing in Tick Label for Japanese/Chinese	✓					
Plot Multi-Panel Graph by X	✓					
Contour Label Support for Multiple Labels per Contour Line, Follow The Flow Of Contour Line	✓					
Step-Horz Connect Control for Links in Sankey	✓					
Fill Area to Arbitrary Axis or Plot	✓					
Span Vertically Pairwise option when Fill Area for Recession Bars	✓					
Merge Graphs to Layout page	✓	✓				
Insert Image Background in Graph	+	✓				
Insert Map in Graphs	+	✓				
Group Plots Properties by Label Rows	✓	✓				
Histograms: Support Log Scale for Bin, Support Overlapping and Skewed Histogram	✓	✓				

GRAPH CUSTOMIZATION (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Plot Color based on Positive Negative	✓	✓				
Browser Graph: Increase speed, Spawn new graph with selected plots, Allow editing of metadata in navigation panel, Explore image stack of multiple matrix objects Using Browser Graph for Image, Contour or Profile plots.	✓	✓				
Stack Lines by Offset in Column Label Row (Metadata)	✓	✓				
Common Color Scale Display for Multiple Surface Plot	✓	✓				
Keep Layer Size when Merging Graph Windows	✓	✓				
More Fill Area Options to Better Support Shapefile Data	✓	✓				
Create Horizontal/Vertical Line and Support Dragging Layer/Object in Line When Holding SHIFT Key	✓	✓				
Ability to Turn Browser Panel on for Regular Graphs	✓	✓				
More Built-in Color Schemes	✓	+				
Left, Right or Center Options for Tick Labels Alignment	✓	✓				
Offset Overlapped Points Vertically	✓	✓				
Center Layer in the Page	✓	✓				
Support Rescale Type for Ternary Coordinates	✓	✓				
Support Using Unicode Characters as Plot Symbols	✓	✓				
Fill to Relative Base in Stack lines by Y Offset Graph	✓	✓	✓			
Special Points: Show Drop lines, Show Label using Flexible Syntax	✓	✓	✓			
Heatmap Improved to Support Triangle Shape and Label Color Follows Colormap	✓	✓	✓			

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GRAPH CUSTOMIZATION (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Apply Transparency to Symbol Fill Color Only	✓	✓	✓			
Further Box Chart Improvements: Whisker/Error Bar Drawn on Top of Data, Whisker Plus/Minus Only,Mean & Median Symbol for Grouped Box, Data Point Masking	✓	✓	✓			
Colormap: Specify Numeric Value for Middle Level in 3-Color Limited Mixing	✓	✓	✓			
Zoom and Rescale Hotkey for 3D Graphs	✓	✓	✓			
Skew 2D and Contour Plots by Adjusting Angles Between Axes	✓	+	✓			
Text Object and Legend Improvements: Support Wrap Text	✓	✓	✓			
Curve Tool for Freehand Drawing of Smoothed Line Object	✓	✓	✓			
New Preferences > Axis Options for Display of Zeros	✓	✓	✓			
Auto-rotate / Auto-hide Long or Overlapped Tick Labels	✓	✓	✓			
Faster Scatter and Contour Drawing Speed for Large Data	✓	✓	✓			
Supersubscript and Align Columns Control in Text Object Properties Dialog	✓	✓	✓			
Color Scale Improvements: Show Subrange of Color, Formula for Tick Labels, Show Major Levels Only, Show Min and Max Levels Only, Independent Control of Head and Tail, Right Align Tick Labels	+	✓	✓			
Stack Lines by Y Offsets Supports Grouping by Label Row Data	✓	✓	✓	✓		
3D Waterfall Support for Label at Specified Indices	✓	✓	✓	✓		
Support Remove Line Between Two Points on Line + Symbol Plots	✓	✓	✓	✓		
Support Specified Color List for Color Mapping	✓	✓	✓	✓		

GRAPH CUSTOMIZATION (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Support Compound Line Style for Line Plot	✓	✓	✓	✓		
Support 3-Color Limited Mixing for Color Mapping	✓	✓	+	✓		
Object Manager Improvements: Move Plot tto Other Layer/Y Axis, Remove a Plot from a Group, Rename plot group's long name	✓	✓	✓	✓		
New Legend Type: Categorical Legend for 3D XYtZ Bar, New Legend for Fill Area Plot	✓	✓	+	✓		
Add Independent Color Scale on Layout Window	✓	✓	✓	✓		
Connect Control in 3D Waterfall which Enables Smooth Waterfall Lines	✓	✓	✓	✓	✓	
Provide Option to Put Axis Title to be in the Beginning/End of Axis	✓	✓	✓	✓	✓	
Support Special Point for 3D XYZ Bar Graph	✓	✓	✓	✓	✓	
Total Label for 3D Stacked Column/Bar Plots	✓	✓	✓	✓	✓	
2D Vector Plot: Support Line Style Customization, Adding Label	✓	✓	+	✓	✓	
Create Custom Legend Entries	✓	✓	✓	+	✓	
Statistics Reference Lines on Graph with Full Customization	✓	✓	✓	✓	✓	
Arrows at Axis Begin or End and can be Put Outside of Layer Frame	✓	✓	✓	✓	✓	
Column Gap control for Double-Y Column Plot	✓	✓	✓	✓	✓	
Distribute Selected Layers/Graphic Objects Horizontally or Vertically	✓	✓	✓	✓	✓	
Symbol Size Increment For Each Plot in Group	✓	✓	✓	✓	✓	
Axis Break Supports Proportional Unit for Each Segment	✓	✓	✓	✓	✓	
Pick Data Points from Graph	✓	✓	✓	✓	✓	
New Annotation Dialog with More Controls for Object Customization	✓	✓	✓	✓	✓	

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GRAPH CUSTOMIZATION (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
More Hatch Patterns, including Geology Patterns	✓	✓	✓	✓	✓	
Dropline Supports Direction Control and Arrow	✓	✓	+	✓	✓	
Support More Bar Shapes for 3D Bars	✓	✓	✓	✓	✓	
Histograms: Label with Bin Counts, Percentage or Both	✓	+	✓	✓	✓	
Grouped Plots: Unbalanced Subgroups Can Display Grid Line Separators, Set Gaps by Dataset	✓	✓	✓	✓	✓	
Support for all 2D objects in 3D graphs: Table, Image, Drawn Objects, Bubble Scale, OLE Object	✓	✓	✓	✓	✓	
Axis Improvements: Multiple Reference Lines and Shading Between in 2D Graphs; More Rescale Options, Tick Labels Combine Column Labels, Leader Lines For Special Ticks, Wrap Tick Labels for 3D Plots	✓	✓	+	✓	✓	
New System Colors Give Your Graphs a Fresh Look	✓	✓	✓	✓	✓	
Skip Weekend and Holidays in Financial Plot	✓	✓	✓	✓	✓	
Text and Legend Improvements: Multi-line Spacing, Annotation Customization, Legend Text Color same as Legend Symbols, Drag Legend to Multiple Columns, Hide Legend of Hidden Plots, Reverse Order of Legend	✓	✓	✓	✓	✓	
Show Symbol in 3D XYY Waterfall, Walls and Ribbons	✓	✓	✓	✓	✓	
Position Label/Metadata Anywhere on Data Plot	✓	✓	✓	✓	✓	
Align Layers at Specified Value, Share Common Scale among Layers	✓	✓	✓	✓	✓	
New Tab-based Axis Dialog with Multi-axis Selection and Easy Navigation	✓	✓	✓	✓	✓	
Wrap Axis Tick Labels, Customize Individual Special Ticks, Custom Axis Scale Formula for 3D OpenGL Axis	✓	✓	✓	✓	✓	

GRAPH CUSTOMIZATION (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Contour Improvements: Boundary Customization, Further Color Scale Customization	✓	+	✓	✓	✓	
Linear and Nested Bubble Scale for Bubble Plot	+	✓	✓	✓	✓	
Custom Percentile and Jitter Points in Box Chart	✓	✓	✓	✓	✓	
Plot: User Defined Menu to Access Customized Templates	✓	✓	✓	✓	✓	✓
Smart Labels - Auto Position of Data Labels	✓	✓	✓	✓	✓	
User Defined Axis Scale Type	✓	✓	✓	✓	✓	✓
Multiple Axis Breaks with No Gap	✓	✓	✓	✓	✓	✓
Multiple Special Tick Labels	✓	✓	✓	✓	✓	✓
Isometric - Link Axis Length to Scale by X/Y Ratio	✓	✓	✓	✓	✓	✓
More Legend Types: Box Chart Components, Point by Point, Categorical Values	✓	✓	✓	✓	✓	✓
Customized Color/Shape/Interior Increment List for Plot	✓	✓	✓	✓	✓	✓
3D Surface Improvements: Lighting Effect, Mesh, Flatten, Shift	✓	✓	✓	✓	✓	✓
Zoom and Pan inside Graph Layer	✓	✓	✓	✓	✓	+
Customizable Data Info. Window to Read Coordinates and More	✓	✓	✓	✓	✓	
Transparency and Gradient Fill Control in Graphs	✓	✓	✓	+	✓	
Embed and Edit Microsoft Word, Excel and Equation Objects Inside Graphs and Layouts	✓	✓	✓	✓	✓	
Non-Linear Z-Axis, and Y- and Z-Value Colormap Support for Waterfall Plots	✓	✓	✓	✓	✓	+
Move, Rotate, Skew and Resize 3D Graphs	✓	✓	✓	✓	✓	
Axis Tick Locations Controls	✓	✓	✓	✓	✓	+
Box Chart with Box/Whisker/Outliers Controls	✓	+	+	✓	✓	+
Fill Area Under/Between Line Plots	✓	+	+	✓	✓	+
Polar Plot with Azimuth and Radial Axis Controzls	✓	✓	✓	+	✓	+

9.* is for Origin versions 9.0 and 9.1 | 20XX* is for versions 20XX and 20XXb | +: Feature was improved in the version

DATA MANAGEMENT	2022	2021*	2020*	2019*	2018*	9.*
Insert Comments and Notes to a Cell	✓					
Cell & Column Formulas with Named Range and Auto-complete	✓					
Sort Column Or Worksheet by Categorical Order	✓					
Join Worksheets by Column	✓					
Statistics on Region-of-Interest for Matrix Data on Status bar	✓					
Convert All Matrix Objects To XYZZZ…Columns In Worksheet.	✓					
Copy Matrix Object to New Sheet/Book	✓					
Clear Data in Region-of-Interest for Matrix	✓					
Copy and Paste Multiple Column Formulas (F(x)=)	✓	✓				
More Flexible Cell Formula Notation	✓	✓				
Append Worksheet Tool Support Appending to End of Each Column	✓	✓				
Convert Subregion of Worksheet to XYZ Columns	✓	✓				
Data Filter Better Supports Date Data	✓	✓				
Matrix Stats, Subtraction, Simple Math, Linear Fit Along Time Axis	✓	✓				
Matrix Image Stack to Support Shapefile-based ROI Averaging to Create Time Axis Profile	✓	✓				
Mini Toolbar to Extract Units from Long Name	✓	✓				
Define and use Python function in Set Column Values dialog	✓	✓				
Copy and Paste Notes Windows to Another Folder or Session	✓	✓				
Color Column with HTML Color Support	✓	✓				

DATA MANAGEMENT (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Auto Conversion When Copy and Pasting Date/Time From Other Application	✓	✓				
Copy Space Separated Data into Single Cell	✓	✓				
Extract Data from Oval, Polygon, etc. Region of Image	✓	✓				
Improve Matrix Shrink to Support More Statistics	✓	✓	✓			
Remove/Combine Duplicated Rows Tool Improvements: Support Multiple Reference Columns, Support Duplicate Tolerance	✓	✓	✓			
More Options Available for Splitting Worksheet by Reference Column	✓	✓	✓			
Support Sorting Results for Copy Column tool	✓	✓	✓			
Matrix Slider Option in Place of Thumbnail Images	✓	+	✓			
Copy and Paste Data as HTML/EMF Table to Other Applications such as MS Word	✓	✓	✓			
Excel Like Absolute Cell Reference in Cell Formula	✓	+	✓			
Support Copy Subrange of Data with Column Label Rows	✓	✓	✓			
Duplicate Project or Workbook preserves cell formula	✓	✓	✓			
Support Copy/Paste of Folders and Workbooks across Origin Sessions	✓	✓	✓	✓		
Filter Columns by Label Row	✓	✓	✓	✓		
Support Splitting Columns by Specified Separator or Interval	✓	✓	+	✓		
Extract Worksheet Rows by Random Sample	✓	✓	✓	✓		
Copy Cell(s) and Paste to a Range	✓	✓	✓	✓		

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DATA MANAGEMENT (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Conditional Formatting: Highlight Cells by Rules, Highlight Duplicate Cells, and Heatmap	✓	✓	✓	✓		
Column List View for Worksheet to Display Only a Column List	✓	✓	✓	✓		
Copy and Paste Filter from One Column to Another	✓	✓	✓	✓		
Support Press Mouse Wheel in Worksheet to Scroll	✓	✓	✓	✓		
Auto Fill Column Label Row Contents to the Right	✓	✓	✓	✓		
Support Copying/Pasting Sheet across Origin Sessions	✓	✓	✓	✓	✓	
X-Function to Set Format of Selected Cells	✓	✓	✓	✓	✓	
Maximum Number of Worksheets/MatrixSheet in Workbook/MatrixBook Increased to 1024	✓	✓	✓	✓	✓	
Simpler Spreadsheet Cell Notation for Column Formulas	✓	✓	+	✓	+	
Ability to Include LaTeX in Text Labels/Legends, and in Worksheet Header Rows etc.	✓	✓	✓	✓	✓	
Embed Layout Window in Worksheet	✓	✓	✓	✓	✓	
Select or Hide Columns in Worksheet by Column Label	✓	✓	✓	✓	✓	
Search & Insert Function and Show Function Syntax Hint in Set Column Values Dialog Box	+	✓	✓	✓	✓	
Customize Categorical Data Order and Apply it to other Columns	✓	✓	✓	✓	✓	
Append Worksheet Row-wise, Column-wise, or by Matched Column	+	+	✓	✓	✓	
Generate Patterned Data	✓	✓	✓	✓	✓	✓
Sort Column by Values in Column Label Rows, Reduce Columns	✓	✓	✓	✓	✓	✓
Lock Filter Condition in those Columns Linked to Source Columns	✓	✓	✓	✓	✓	✓
Excel-Like Data Filtering	✓	+	✓	✓	✓	✓
Floating Graphs in Worksheet	✓	✓	✓	✓	✓	✓

DATA MANAGEMENT (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Split a Worksheet into Multiple Worksheets by Number of Columns/Rows, or by Column Label	✓	✓	+	+	✓	✓
XYZ Gridding in Linear or Logarithmic Scale	✓	+	✓	✓	✓	✓
Reduce XY Data by Group, Reduce Data to Evenly Spaced X	✓	✓	✓	+	✓	PRO
Reduce Each Column in Worksheet by Combining Duplicate Rows	✓	✓	✓	✓	✓	✓
Pivot Table	✓	✓	✓	✓	✓	+
Stack Columns and Unstack Columns	✓	✓	✓	✓	✓	+
Reduce Duplicate X Data, Reduce Data by Skipping Every N Points	✓	✓	✓	✓	✓	✓
Worksheet Query (Extract Values from Worksheet)	✓	✓	✓	+	✓	✓

MISCELLANEOUS	2022	2021*	2019*	2018*	2017	9.*
Show or Hide Pro Menu Commands in Regular Origin	✓	✓	✓			
Much Faster Import, Drawing, Data Manipulation, Analysis and Recalculate Speed for Large Data	✓	✓	+			
Unicode(UTF-8) Support	✓	✓	✓	✓		
Connection to OriginLab website Using secure connection (https)	✓	✓	✓	✓		
Zoom and Pan on Graphs, Worksheets, Matrices and Layouts	✓	✓	✓	✓	✓	✓
Native 64-Bit Application	✓	✓	✓	✓	✓	✓
Native 32-Bit Application				✓	✓	✓

IMPORTING	2022	2021*	2020*	2019*	2018*	9.*
Connect to OneDrive and Google Drive	✓					
N42 Connector to Import N42 Files	✓					
CSV Connector: Auto-detect "yyyy-MM-dd HH:mm:ss,###" Date Format; Auto-detect Main Headers	✓					
Import from SQLite Files Using Database Connector	✓	✓				
Import and Reduce NetCDF File by Partial Import or Averaging During Import	✓	✓				

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IMPORTING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Unlock Imported Data for Data Connector from Menu	✓	✓				
Partial Import Support: Excel Connector, TDMS Connector, NetCDF Connector	✓	✓				
Data Connector for .RAW file format from Thermo Fisher Scientific	✓	✓				
Shapefile Connector	✓	✓				
Import Wizard Supports Python-based Import Filter	✓	✓				
Matlab Connector Supports Opaque Variables Like Date Time, Table ect	✓	+				
Data Connector for TDMS and Bruker DQL/RAW files	✓	✓				
CSV Data Connector Support Append Rows	✓	+				
Connect to Multiple Files Support Specifying a Folder to Import	✓	✓				
Connect to Multiple Files	✓	✓	✓			
Data Navigator Panel added to Workbook when Connecting to Multi-page Files	✓	✓	✓			
CSV Data Connector Wild-card Support for Data Block Marker	✓	✓	✓			
Database Connector Dialog Supports ODBC Connection by Data Source or String	✓	✓	✓			
Multi-threaded ASCII import	✓	✓	✓			
10x Faster Import of Large Text Files	✓	✓	✓			
Drag and Drop support of Data Connector	✓	✓	✓			
Query and Pull Columns from OPJU Files	✓	✓	✓			
Support Partial Import, Data Block Marker and Preview for CSV Data Connector	✓	✓	✓			
Specify Long Name, Units and Comments in Excel Connector	✓	✓	✓			
Data Connector Maintain Connection with Web File or Local File as Data Source (CSV, HTML, JSON, MS Excel, Origin Project and more)	✓	+	+	✓		

IMPORTING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Set Origin as Default Program to Open Data Files	✓	✓	✓	✓	✓	
Import Specified Column/Rows only in Excel and CSV	✓	✓	✓	✓	✓	
Source File Header Row to Show Imported File Name	✓	✓	✓	✓	✓	
Undo Import of ASCII, Excel and CSV	✓	✓	✓	✓	✓	
New Excel Import Dialog without Using COM Support	✓	✓	✓	✓	✓	
More 3rd-Party Import Formats: ISF, SAS, BRUKER OPU	✓	✓	✓	✓	✓	
Script after Import and Column Plot Designation for More Import Routines	✓	✓	✓	✓	✓	
Import SPSS Data Files	✓	✓	✓	✓	✓	
Importing OPJ	✓	✓	✓	✓	✓	✓
Import Mat File Structure	✓	✓	✓	✓	✓	✓
Specify Channel When Import MDF, NITDM, DIADem, Prism, pClamp, Matlab Data	✓	✓	✓	✓	✓	✓
File Import Menu Customization Dialogue	✓	✓	✓	✓	✓	✓
Import TDMS 2009, MZXML and Prism Files	✓	+	✓	✓	✓	✓
SQL Editor for Database Import	✓	✓	✓	✓	✓	✓
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, HDF5 etc.	✓	✓	✓	✓	✓	+
Graphically Construct SQL Queries	✓	✓	✓	✓	✓	✓
ASCII and Binary Import Wizard Provides Visual Feedback during Import	✓	✓	✓	✓	+	+
Import Images (PNG, GIF, TIF, TGA, PCX, PSD, WMF, etc. (Convert to Raster))	✓	✓	✓	✓	✓	✓
Drag-and-Drop Data File from Windows Explorer into Origin	✓	✓	✓	✓	✓	✓
Import Wizard Filter for Repeat Import of Similar Data	✓	✓	✓	✓	✓	✓

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EXPORTING & PRESENTATION	2022	2021*	2020*	2019*	2018*	9.*
Simplified Graph Export Routine Added	✓					
Export/Update Worksheets as Tables in a SQLite Database File	✓	✓				
Simpler tool to Export Graph as Image	+	✓				
Export NetCDF Data from Matrix	✓	✓				
Graph Export Settings can be Saved in Page	✓	✓				
Export Mulit-sheet Workbook as Excel File	✓	✓	✓	✓		
Copy Graph and Paste Directly to Online Documentation Tools such as Confluence Page	✓	✓	✓	✓		
Option to Export Multiple Graphs as a Single Multi-page PDF file	✓	✓	✓	✓	✓	
Export Graphs with PE Folder Name Included in the Name of the Exported File	✓	✓	✓	✓	✓	
Copy / Export User-defined Area of Graph Page	✓	✓	✓	✓	✓	
Ignore Hidden Columns in ASCII Export	✓	✓	✓	✓	✓	
Export Graphs in Subfolders of Project to Corresponding Subfolders under Project File Folder in Windows Explorer	✓	✓	✓	✓	✓	
Send Graph to PowerPoint Improvements: Specify Graph List and Order, Specify Slide Layout and Style	✓	✓	✓	✓	✓	
Create Movies from Origin Windows Using GUI Tool or Script	✓	✓	✓	✓	✓	✓
Graph Export Supports Transparency for PDF and EPS Format	✓	✓	✓	✓	✓	✓
Export All Graphs to PowerPoint	✓	✓	✓	✓	✓	+
Export ASCII Data to Existing File by Appending or Replacing	✓	✓	✓	✓	✓	✓
Slide Show Graphs and Layouts	✓	+	✓	✓	✓	✓
Export Worksheet as Image, WAV, NI TDM/TDMS File or Multi-Page PDF Document	✓	✓	✓	✓	✓	✓
Graph Export Formats Include: CGM, EPS, TIFF, PDF, JPEG, EMF, PSD, etc.	✓	✓	✓	✓	+	✓
Export Image to Raster File Format	✓	✓	✓	✓	+	✓

GADGETS	2022	2021*	2020*	2019*	2018*	9.*
Smart Gridline Removal for Digitizer Tool	✓					
Cluster Gadget Supports Arbitrary Shape for ROI	✓	✓				
Gadgets Support Output to Clipboard	✓	✓				
Support Vertical Cursor Gadget on Linked Layers	✓	✓				
Output Gadget Results to Source Data Workbook	✓	✓	✓			
Vertical Cursor Gadget: Compare Two Cursors, Show All Info in One Label	✓	+	✓	✓		
Allow to clear category settings for some points with Cluster Gadget	✓	✓	✓	✓	✓	
Integrate Gadget Now Supports Marking of Fill Area Under Multiple Curves	✓	✓	✓	✓	✓	
Curve Translate Gadget	✓	✓	✓	✓	✓	
Profile Gadget	✓	✓	✓	✓	✓	
Surface Integration Gadget	PRO	PRO	PRO	PRO	PRO	PRO
Global Vertical Cursor Gadget Across Graphs	✓	✓	✓	+	✓	✓
Intersect Gadget	✓	✓	✓	✓	✓	✓
Quick Sigmoidal Fit Gadget	✓	✓	✓	✓	✓	✓
Cluster Gadget	PRO	+	PRO	PRO	+	PRO
Differentiate Gadget	✓	✓	✓	✓	✓	✓
Interpolate Gadget	✓	✓	✓	✓	✓	✓
Quick Peaks Gadget	✓	✓	✓	✓	✓	✓
Digitizer	+	✓	✓	✓	✓	+
Quick Fit Gadget	✓	✓	✓	✓	✓	✓
Rise Time Gadget	PRO	PRO	PRO	PRO	PRO	PRO
Integrate Gadget	✓	✓	✓	+	+	✓
FFT Gadget	✓	✓	✓	✓	✓	✓
Statistics Gadget	✓	✓	✓	+	✓	✓

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MATHEMATICS	2022	2021*	2020*	2019*	2018*	9.*
Improve Handling of NANUM for Moving Functions	✓	✓				
More Options for Average Multiple Curves with Different X Range	✓	✓				
Simple Curve Math Supports Custom Formula	✓	✓	✓			
Show Polygon Area of Selected Contour Line in Data Display	✓	✓	✓	✓	✓	
Akima Spline in Interpolation	✓	✓	✓	✓	✓	✓
2D Interpolation and Extrapolation	✓	✓	✓	✓	✓	✓
Compute Polygon Area	✓	✓	✓	✓	✓	✓
Compute Surface Area and Matrix Area	PRO	PRO	PRO	PRO	PRO	PRO
2D Volume Integration	PRO	PRO	PRO	PRO	PRO	PRO
3D Interpolation	✓	✓	✓	✓	✓	PRO
Trace Interpolation on XY Data	PRO	PRO	PRO	PRO	PRO	PRO
1D Interpolation and Extrapolation	✓	✓	✓	✓	✓	+
Interpolation and Extrapolation of Y From X	✓	✓	✓	✓	✓	+
Trace Interpolation on XYZ Data	✓	✓	✓	✓	✓	✓
Normalization Across Multiple Columns or Curves	✓	✓	✓	✓	✓	✓
Set Column or Matrix Values by Using Mathematics Operations	✓	✓	✓	✓	✓	+

CURVE FITTING	2022	2021*	2020*	2019*	2018*	9.*
Clearer Derived Parameters in NLFit	✓					
Incorporate Python into Fitting Function Builder	✓	✓				
Mini Toolbar to Add Linear Fitting Curve to Plot	✓	✓				
More Fitting Functions Available from Preshipped Fitting Function Library App	✓	✓				
Support Defining Fitting Functions Using Python	✓	✓				
Include Standard Error on Derived Parameters in the Parameter Summary Table	✓	✓	✓	✓	✓	
Support Integral in Implicit Function	✓	✓	✓	✓	✓	

CURVE FITTING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
< and > Two Buttons on Parameters Tab of Nonlinear Curve Fit Dialog to Switch Between Sets of Parameters to Compare Fitting Result	✓	✓	✓	✓	✓	
Provide Selection of Parameter Initialization Formula when Defining Fitting Functions	✓	✓	✓	✓	✓	
More Built-in Fitting Functions such as Photosynthesis Irradiance (PI) Curve, 3D Curves, Diode And Solar Cell Data ect.	✓	✓	✓	✓	+	
Provide Deming Method in Fit Linear with X Error	PRO	PRO	PRO	PRO	PRO	
Customize Parameter Table in Graph for LR/PR/NLFit and Peak Fitting	✓	✓	✓	✓	✓	
Zoom on Preview tab of Nonlinear Curve Fit	✓	✓	✓	✓	✓	
Improved Fitting Results: Add Normal Probability Plot of Residuals, Put Residual Plots in a Single Graph	✓	✓	✓	✓	✓	
Fit and Rank All Functions in a Category	PRO	PRO	PRO	PRO	PRO	PRO
Orthogonal Regression for Implicit/Explicit Functions	PRO	PRO	PRO	PRO	PRO	+
Calculate Standard Error for Derived Parameter	✓	✓	✓	✓	✓	✓
Linear Fit with Support for X Error	PRO	PRO	PRO	PRO	PRO	+
Surface Fit with Multiple Peaks	PRO	PRO	PRO	PRO	PRO	PRO
New Fitting Function Builder for Fitting Function Creation	✓	✓	✓	✓	✓	✓
Graphical Residual Analysis for Fitting	✓	✓	✓	✓	✓	✓
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	PRO
Fitting Comparison	+	PRO	PRO	PRO	PRO	PRO

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PEAK ANALYSIS	2022	2021*	2019*	2018*	2017	9.*
Peak Analyzer: Support Modifying Number Of Points for Individual Peaks	✓					
Support Python-based Fitting Functions in Peak Analyzer	✓	✓				
Peak Analyzer: Support for Sorting in Output Sheet, Option to Use Data in X Axis Range, Custom Peak Filtering Using Script	✓	✓	✓			
Peak Analyzer: Support Output Baseline Subtracted Peaks Information after Finding Peaks, Report Baseline Mode in Notes node, Add Hint Tab in Fit Control Dialog	✓	✓	✓	✓		
New Method for Peak Detection: Fourier Self Deconvolution	✓	✓	✓	✓	✓	
Auto Bound Setting for Positive-Only and Negative-Only Peaks	✓	✓	✓	✓	✓	
Sequentially Initialize Parameter Values in Batch Peak Analysis	✓	✓	✓	✓	✓	
Multiple Peak Fit Tool	✓	✓	✓	✓	✓	✓
Batch Peak Fitting	✓	✓	+	✓	✓	PRO
Peak Analyzer: Peak Fitting	+	+	+	PRO	PRO	PRO
Peak Analyzer: Fit Baseline with Peaks	PRO	PRO	PRO	+	PRO	PRO
Peak Analyzer: Peak Integration	✓	✓	+	✓	✓	✓
Peak Analyzer: Peak Finding	✓	✓	+	+	✓	✓
Peak Analyzer: Baseline Detection	✓	✓	✓	✓	✓	✓
Peak Analyzer: Baseline Subtraction	✓	✓	✓	✓	✓	✓

SIGNAL PROCESSING	2022	2021*	2020*	2019*	2018*	9.*
Support Gaussian And Kaiser Window Function For FFT And IFFT	✓					
Support Binomial Filter for Smoothing	✓	✓	✓	✓	✓	
LOWESS and LOESS Smoothing	✓	✓	✓	✓	✓	✓
IIR Filter Design	PRO	PRO	PRO	PRO	PRO	PRO
2D FFT Filter	PRO	PRO	PRO	PRO	PRO	PRO
Signal Envelope	PRO	PRO	PRO	PRO	PRO	PRO
Coherence	PRO	PRO	PRO	PRO	PRO	PRO
Signal Decimation to Reduce/Resample Data	PRO	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
Wavelet Analysis	PRO	PRO	PRO	PRO	PRO	PRO
Hilbert Transform	PRO	PRO	PRO	PRO	PRO	PRO
2D Correlation	PRO	PRO	PRO	PRO	PRO	PRO

STATISTICS	2022	2021*	2020*	2019*	2018*	9.*
Two Sample T-test On Rows Supports "Welch Test"	✓					
K-Means Cluster: Support Option to Standardize Variables; Cluster Plot	✓					
ROC Curve: Display Optimal Cutpoint; Improved Result Graph	✓					
Statistics on Rows Support for Multi-sheet Input	✓	✓				
Provide Significance Letters Output in ANOVA Tools	✓	✓				
Mean Comparison Support for Non-parametric Tools	✓	✓	✓			
Statsxy X-Function to Get Statistics by Binning	✓	✓	✓			
Support Combine Multiple Dataset as a Single One to Normalize	✓	✓	✓			

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STATISTICS (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Support Grouping for Statistics on Rows	✓	✓	✓	✓	✓	
Support Means Plot in Two-Way ANOVA	✓	✓	✓	✓	✓	
3-way ANOVA	PRO	PRO	PRO	PRO	PRO	
Partial Correlation	PRO	PRO	PRO	PRO	PRO	
Cross Tabulation	PRO	PRO	PRO	PRO	PRO	
Distribution Fit	PRO	PRO	PRO	PRO	PRO	
t-Tests on Rows	+	PRO	PRO	PRO	PRO	
One/Two-Proportion Testing	PRO	PRO	PRO	PRO	PRO	PRO
More Power & Sample Size Tests (One/Two-Proportion, One/Two Variance)	PRO	PRO	PRO	PRO	PRO	PRO
Grubbs Test and Q-test to Detect Outliers	✓	✓	✓	✓	✓	+
Multivariate Analysis: Cluster, Principal Component, Discriminant, , Partial Least Squares Regression etc.	+	PRO	PRO	PRO	+	PRO
ROC Curve	+	PRO	PRO	PRO	PRO	PRO
Survival Analysis: Kaplan-Meier, Cox Proportional Hazard ,Log-Rank, etc.	PRO	PRO	PRO	+	PRO	+
Nonparametric Tests: Mann-Whitney Test, etc.	PRO	PRO	PRO	PRO	PRO	PRO
Power and Sample Size	PRO	PRO	PRO	PRO	PRO	+
One- and Two-Way Repeated Measures ANOVA	PRO	PRO	PRO	PRO	PRO	PRO
Hypothesis Testing	✓	✓	✓	✓	✓	+
Correlation Coefficient	✓	✓	PRO	PRO	PRO	PRO
Normality Test	✓	✓	✓	✓	✓	✓
Basic Descriptive Statistics, 1D and 2D Frequency Count, Discrete Frequencies, One/Two-Way ANOVA	✓	✓	✓	✓	+	✓

CONNECTIVITY WITH OTHER APPLICATIONS	2022	2021*	2019*	2018*	2017	9.*
Allow MATLAB Console to Connect to Already Running Instance of MATLAB	✓	✓	✓			
Communicate with Individual Mathematica V8 or Later	✓	✓	✓	✓	✓	
R Console and support for Rserve to exchange data between Origin and R	✓	✓	✓	✓	✓	
MATLAB Console with GUI Support to Transfer Data Between Origin and MATLAB	✓	✓	+	✓	✓	✓
LabVIEW Connectivity	✓	✓	✓	✓	✓	✓
Automation Server Support	✓	✓	✓	✓	✓	✓

PROGRAMMING	2022	2021*	2020*	2019*	2018*	9.*
Python: Data Connector Class for Controlling Settings; Methods to Set Parameter Value During Fitting; Access to Image Window; More Functions for Worksheet Manipulation	✓					
Python Packages Manager Supports Proxy Setting	✓					
LabTalk: Access for Fill Only Transparency; Count User-Defined Parameters in Worksheet; Save Workbook; Access on ROI Object; Wipe All Formula and Script	✓					
OC: File Section Access with UTF16, Image Handling; Load Template as Minimized	✓					
Support Intellisense in Python Console	✓	✓				

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PROGRAMMING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Support Python in Setting Column Values, Defining Fitting Funciton, Import Filter, Python Script in Buttons etc.	✓	✓				
New originpro Package for Easy Access to Origin from Python	✓	✓				
Access Python Functions from LabTalk and Origin C	✓	✓				
Support Python File Debug in Code Builder	✓	✓				
Added OrglabExt for better COM connection to Origin from external Python	✓	✓				
New LabTalk Controls: Update Pending Locks, Access to Dash Definition, Control of Box Plots, Sort Columns by Long Name, Control Plot Label Using Index	✓	✓				
Preshipped Python 3.8	✓	✓				
New Lookup & Reference Functions for Categorical Data	✓	✓	✓			
New LabTalk Functions: Get or Set Column as Categorical or use Sample Interval, Join Arbitrary Ranges into Single Dataset, Calculate Standard Error of Dataset, Get Plot Type Info, open Edit Range Dialog	✓	✓	✓			
New X-Function to Split Cell Text to Columns like Excel	✓	✓	✓			
LabTalk Option to Generate Gadget Output for All Curves, All Layers, etc.	✓	✓	✓			
Control Polygon or Polyline Object thru LabTalk	✓	✓	✓			

PROGRAMMING (CON'T)	2022	2021*	2020*	2019*	2018*	9.*
Multi-sheet Range Support	✓	✓	✓	✓		
Provide Python Package OriginExt to Access Origin Functionality from External Python through COM	✓	✓	✓	✓		
Provides LabTalk Functions for Linear Fit	✓	✓	✓	✓		
Origin API for calling Origin from Outside Python	✓	✓	✓	✓	✓	
Unicode (UTF-8 Encoded) Text Strings Support in LabTalk and OriginC	✓	✓	✓	✓	✓	
Graph Object Properties Access From LabTalk	✓	✓	✓	✓	✓	
Support for HTML Dialog with Java Script	✓	✓	✓	✓	✓	
Distribution Fit	✓	✓	✓	✓	+	
Integrate Python as a Scripting Language in Origin	✓	✓	✓	✓	✓	
Ability to Encrypt OC code	✓	✓	✓	✓	✓	
Code Builder has New Editor Based on Scintilla Code, which Supports Code Folding, etc.	✓	✓	✓	✓	✓	✓
Origin C Access to Full NAG Mark 25 Library	✓	✓	✓	✓	✓	✓
Generate LabTalk Script Command from Current Dialog Box Settings	✓	✓	✓	✓	✓	✓
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	✓	✓	✓	✓	✓	✓

9.* is for Origin versions 9.0 and 9.1 | 20XX* is for versions 20XX and 20XXb | +: Feature was improved in the version