



JMP Instructional data set 001

Software Technical Support

JMP platforms and statistical methods

Graph Builder:	Overlay time series graph, bar chart
Distribution:	Summary statistics
Formula Editor:	Creating a new variable

Problem statement

A technical support department for a video/audio editing software company is interested in examining the volume and types of support calls it receives from its customers. These data help the company identify bugs, usability issues, and provide direction in the creation of support documentation, online help, and instructional tutorials. Management also uses these data to determine staffing strategies such as how many technical support specialists should be available each day and which features of the software that they should have proficiency.



Data for the weekly number of technical support calls from Jan 2024 to Dec 2025 were gathered and categorized into one of eight types (installation, peripherals, importing, audio, video, editing, exporting, other). Also included in the data is the date of version and point releases of the software.

Data

IDS_001.jmp

Week Ending	Saturday from Jan 9, 2024 to Dec 31, 2025
Version	Current version of the software <i>Note: The software runs from the cloud and automatically updates to the latest version. As a result, all users will be working from the most current version of the software when they call for support.</i>
Installation	Number of calls related to issues/help with installation
Peripherals	Number of calls related to issues/help with the software's integration with peripheral devices
Importing	Number of calls related to issues/help with importing files into the software
Audio	Number of calls related to issues/help working with audio components
Video	Number of calls related to issues/help working with video components
Editing	Number of calls related to issues/help working with editing tools
Exporting	Number of calls related to issues/help with exporting files
Other	Number of calls related to issues/help not in above categories

Exercises

1. Create a new variable that is the total number of calls for each week.

Instructions:

In the data table, highlight the eight categories ('Installation', ..., 'Other'). Right-click inside region in the variable names. Choose New Formula Column > Combine > Sum in the menu that pops up. Rename that column 'Total'.

2. Create the following two graphs: a) an overlay time series graph displaying the weekly volume of calls for each category of support, b) a bar chart displaying the weekly volume of calls with the ability to select which of the specific categories to show. Use these two graphs to help answer the questions in the remaining exercises.

Instructions:

Overlay Time Series. Choose Graph > Graph Builder. Place 'Week Ending' on the X axis. Select all eight variables for the different categories ('Installation', ..., 'Other') and place on the Y axis. Select the line graph icon in the graph palette. 

Bar chart. Graph > Graph Builder. Place 'Week Ending' on the X axis. Place 'Installation' on the Y axis. Select the bar chart icon in the graph palette.  Place 'Version' in the color role.

Under the Red Triangle Menu, choose Redo > Column Switcher. Select 'Installation' from the Initial Column list, and select the nine variables: 'Installation', ..., 'Total' for the Replacement Columns. Use the Column Switcher added to the graph window to view the volume of calls for any of the eight categories or in total.

3. Are there any general increasing/decreasing trends over time for certain requests? Determine which types of support is needed most/least frequently. What are some potential reasons for this?
4. Identify if changes occur in the volume of support requests following point and version releases of the software. Were there any noticeable changes in the volume of support needed after these releases? What might this mean?
5. Are there any weeks that stand out as having a larger or smaller volume of requests? What are some potential reasons for this?
6. Historically, a technical support specialist can service about 15-25 calls a day. How many technical support specialist would you recommend be working in a typical day. What components of the software should the specialists receive some of the most training in?

Instructions:

It will help to generate some summary statistics for all the variables. Choose Analyze > Distribution. Select all the nine variables ('Installation', ..., 'Total') and place in the Y, Columns role. Click OK.

7. What are some recommendations for development of help documentation and learning resources the company can create to support customers in their use of the software?
8. What other data would be useful to have available to help guide staffing strategies and development of customer support resources?