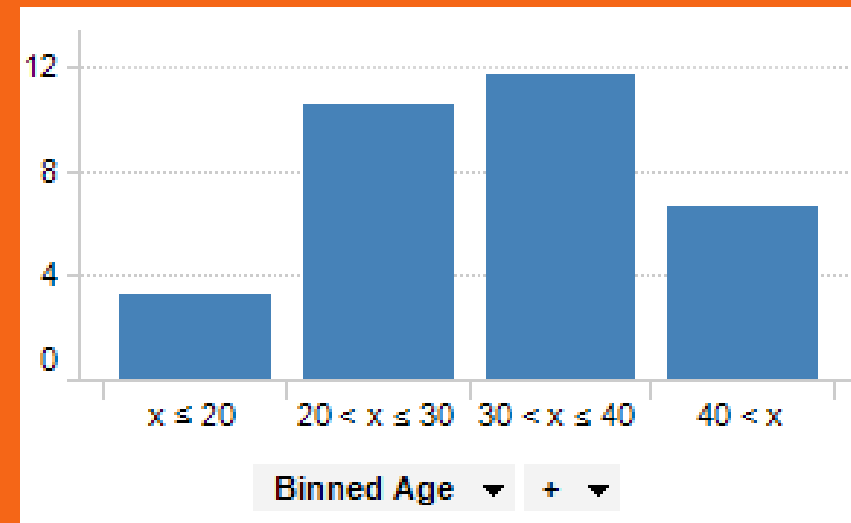
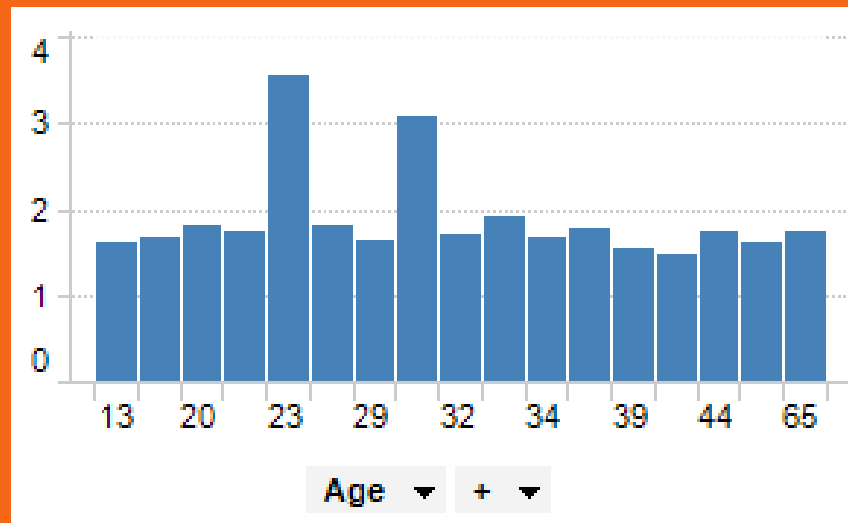


BINNING IN TIBCO SPOTFIRE

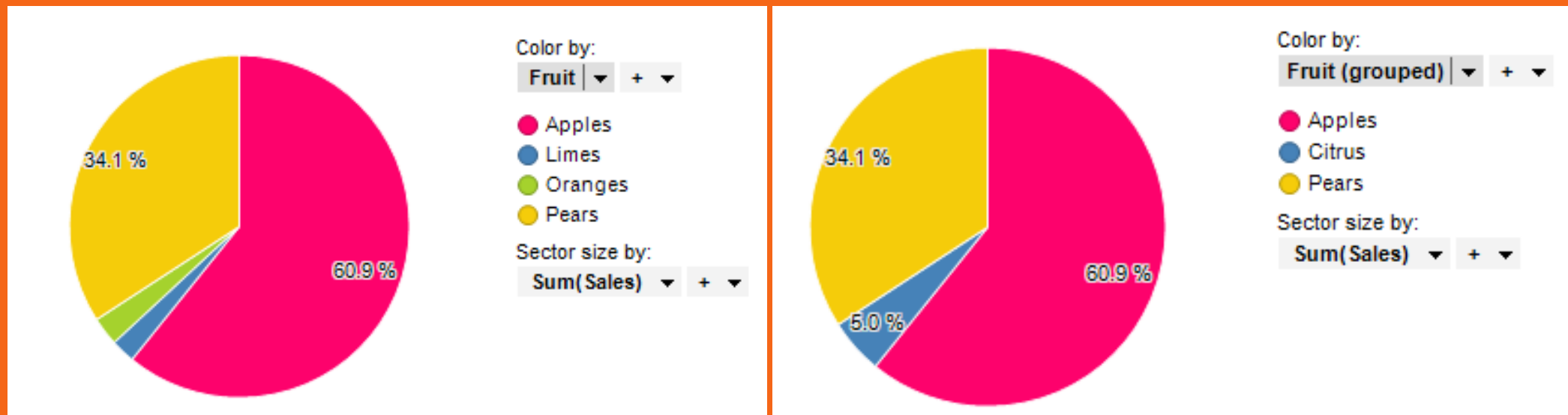
GENERAL INFORMATION

Binning is a way to group a number of more or less continuous values into a smaller number of "bins". For example, if you have data about a group of people, you might want to arrange their ages into a smaller number of age intervals. Numeric columns can also be temporarily grouped by right-clicking on a column selector and clicking Auto-bin Column.



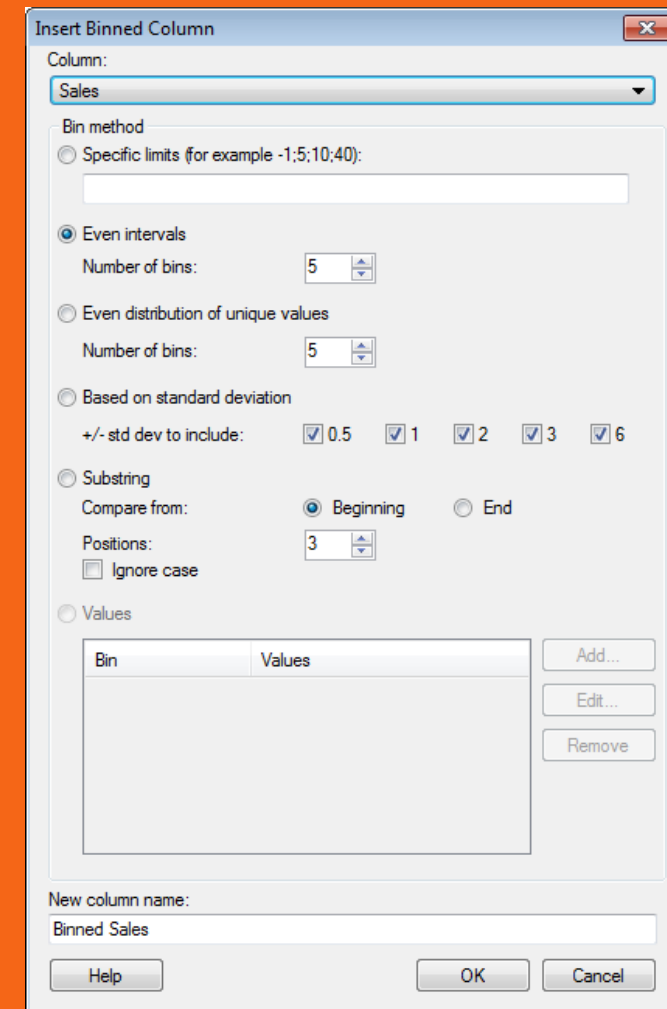
EXAMPLE OF BINNING CATEGORICAL DATA

We can bin not only numeric, but also categorical data. It can be seen on pictures below, here we got 4 categories of fruits: apples, limes, oranges and pears. But what if we're not interested in so detailed information about oranges and limes? Then we can bin it in one category called Citrus.



HOW TO ADD BINNING

1. Select **Insert > Binned Column....**
2. Select a **Column** to bin
3. Select a **Bin method**
4. Type a **New column name** for the binned column.
5. Click **OK**.



BIN METHODS

Specific Limits

Allows you to explicitly enter values, separated by semicolons, of the limits to use for each bin.

Even Intervals

Allows you to specify the desired number of bins and divides the value range into equal intervals.

Even Distribution of Unique Values

Allows you to specify the desired number of bins and divides the bins so that each one contains an equal number of unique values.

BIN METHODS

Based on Standard Deviation

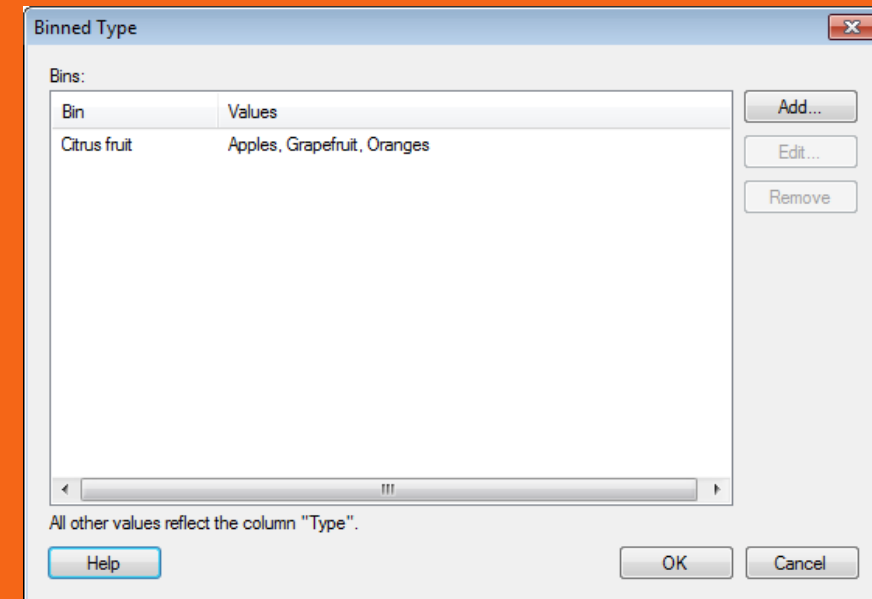
Allows you to divide the range into sections as described by the selected standard deviation multipliers.

Substring

Allows you to group the values by the first or last characters in the column to be binned.

Values

Allows you to group values from the selected column into bins. Each added bin is listed, and so are the included values.



ADVANCED SETTINGS

Axis mode

Specifies whether the column or hierarchy should be treated as continuous or categorical.

Continuous

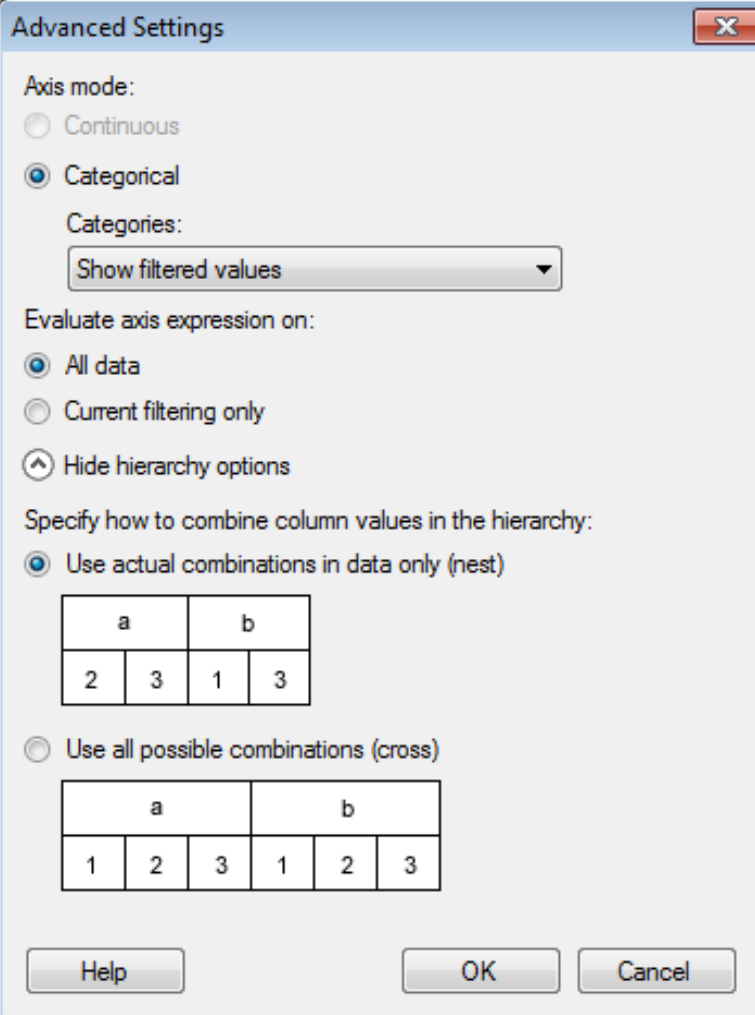
Select this option for numerical columns when you want the values to be treated as continuous, numerical values.

This option is not available for properties that are always categorical (like string columns).

Categorical

Select this option when you want the values to be seen as categories rather than numerical values.

For example, if you have the years 2001, 2002 and 2003 in a column, you would probably like to treat the different values as categories rather than numbers.



The image shows a screenshot of the 'Advanced Settings' dialog box. It contains several options for configuring axis modes and data evaluation. The 'Axis mode' section has two radio buttons: 'Continuous' and 'Categorical', with 'Categorical' selected. Below this is a 'Categories' dropdown menu showing 'Show filtered values'. The 'Evaluate axis expression on:' section has three radio buttons: 'All data' (selected), 'Current filtering only', and 'Hide hierarchy options'. The 'Specify how to combine column values in the hierarchy:' section has two radio buttons: 'Use actual combinations in data only (nest)' (selected) and 'Use all possible combinations (cross)'. Below the 'nest' option is a table with two columns, 'a' and 'b', and two rows of values. Below the 'cross' option is a table with two columns, 'a' and 'b', and two rows of values. The dialog box has 'Help', 'OK', and 'Cancel' buttons at the bottom.

Advanced Settings

Axis mode:

☐ Continuous

☒ Categorical

Categories:

Show filtered values

Evaluate axis expression on:

☒ All data

☐ Current filtering only

☐ Hide hierarchy options

Specify how to combine column values in the hierarchy:

☒ Use actual combinations in data only (nest)

a		b	
2	3	1	3

☐ Use all possible combinations (cross)

a			b		
1	2	3	1	2	3

Help OK Cancel

ADVANCED SETTINGS (CATEGORIES)

Show filtered values

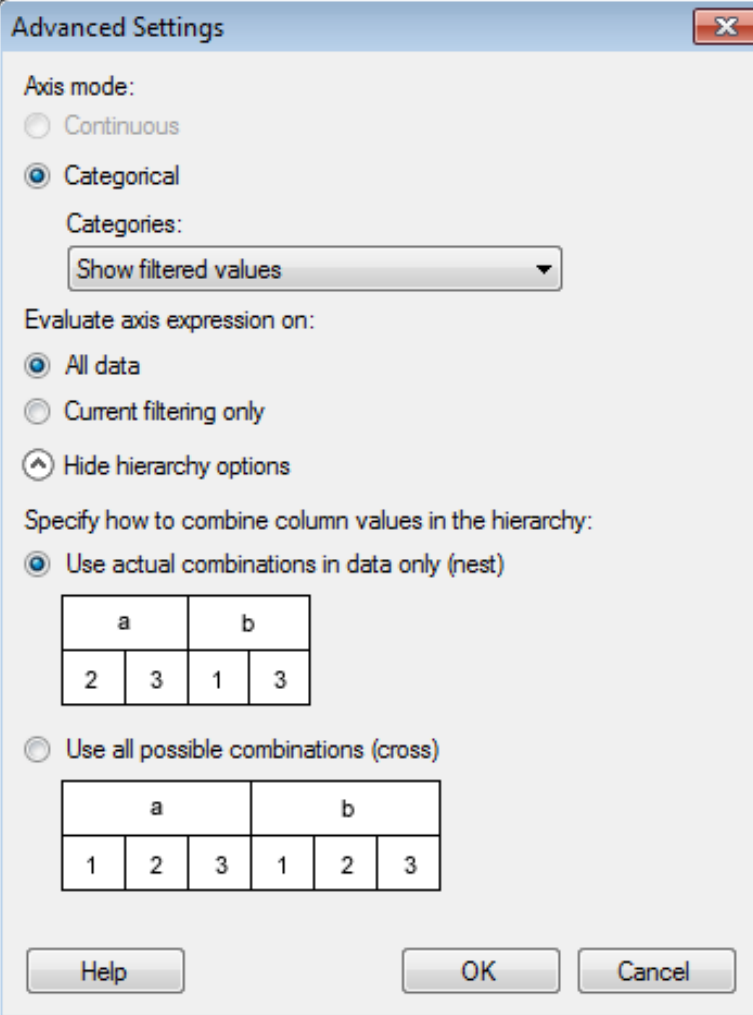
Select this option to display values available after current filtering only. This means that those categories that are visible will change with the filtering and that categories currently without any values will be hidden from the visualization.

Show filtered range

Select this option to hide empty categories on both ends of the currently visible range. This means that those categories that are visible will change with the filtering, and that empty categories within the currently visible range will remain visible.

Show all values

Select this option to keep all categories visible even if data for some categories have been filtered out.



The 'Advanced Settings' dialog box is shown with the following options:

- Axis mode:**
 - ☐ Continuous
 - ☒ Categorical
- Categories:**
 - Show filtered values (selected)
- Evaluate axis expression on:**
 - ☒ All data
 - ☐ Current filtering only
 - ☒ Hide hierarchy options
- Specify how to combine column values in the hierarchy:**
 - ☒ Use actual combinations in data only (nest)

a		b	
2	3	1	3
 - ☐ Use all possible combinations (cross)

a			b		
1	2	3	1	2	3

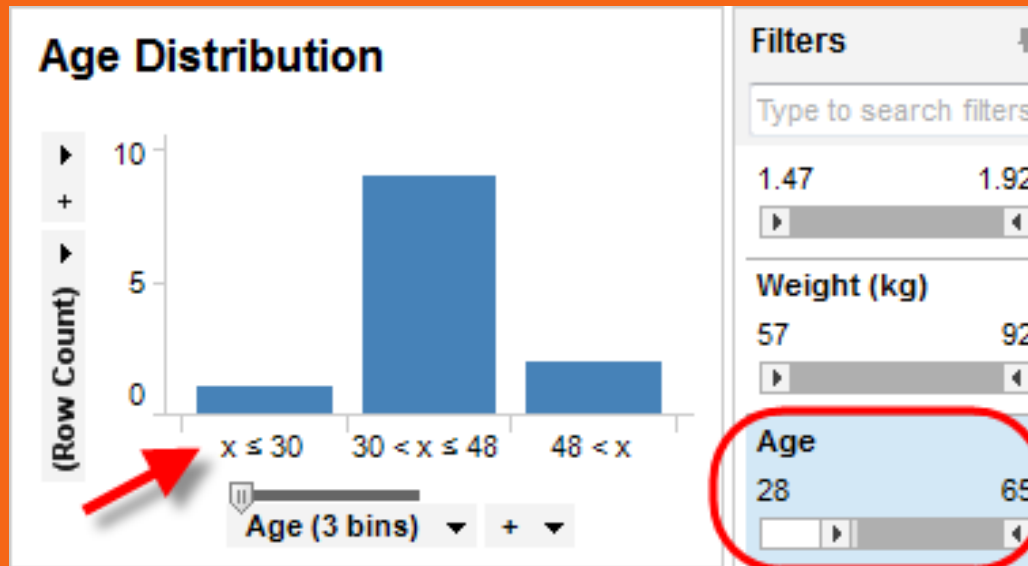
Buttons: Help, OK, Cancel

ADVANCED SETTINGS

Evaluate axis expression on...

All data

In the binning example above, the distribution of the available bins is calculated on the entire data volume. Filtering will not change the available bins on the axis, only the values therein:



Advanced Settings

Axis mode:

- ☐ Continuous
- ☒ Categorical

Categories:

Show filtered values

Evaluate axis expression on:

- ☒ All data
- ☐ Current filtering only
- ☒ Hide hierarchy options

Specify how to combine column values in the hierarchy:

- ☒ Use actual combinations in data only (nest)
- ☐ Use all possible combinations (cross)

a		b	
2	3	1	3

a			b		
1	2	3	1	2	3

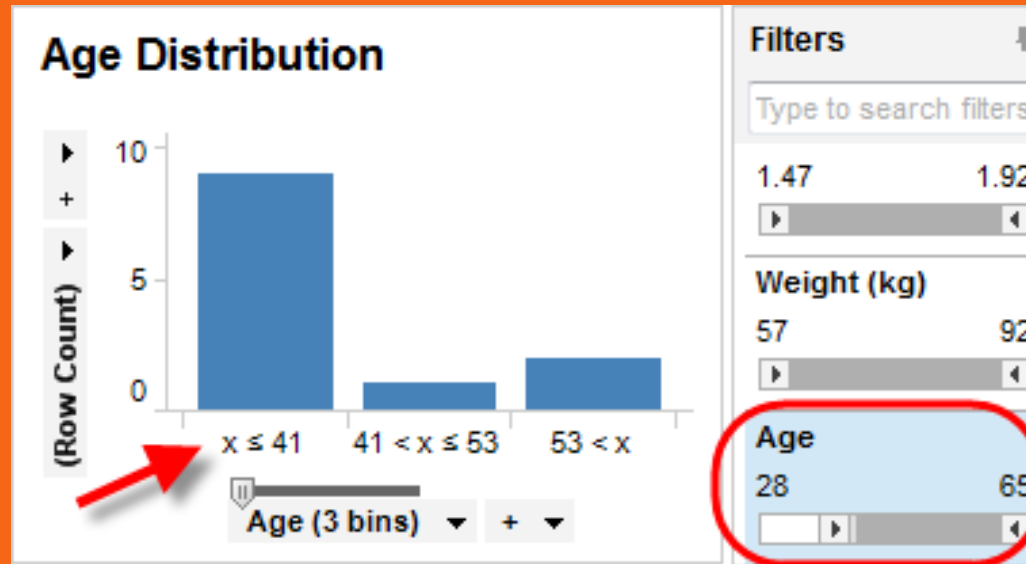
Help OK Cancel

ADVANCED SETTINGS

Evaluate axis expression on...

Current filtering only

Using the same binning expression as above, filtering on Age will recalculate the available bins with new bin intervals for each filtering when this option is selected:



Advanced Settings

Axis mode:

- ☐ Continuous
- ☒ Categorical

Categories:

Show filtered values

Evaluate axis expression on:

- ☒ All data
- ☐ Current filtering only
- ☒ Hide hierarchy options

Specify how to combine column values in the hierarchy:

- ☒ Use actual combinations in data only (nest)
- ☐ Use all possible combinations (cross)

a		b	
2	3	1	3

a			b		
1	2	3	1	2	3

Help OK Cancel

ADVANCED SETTINGS

Specify how to combine column values in the hierarchy

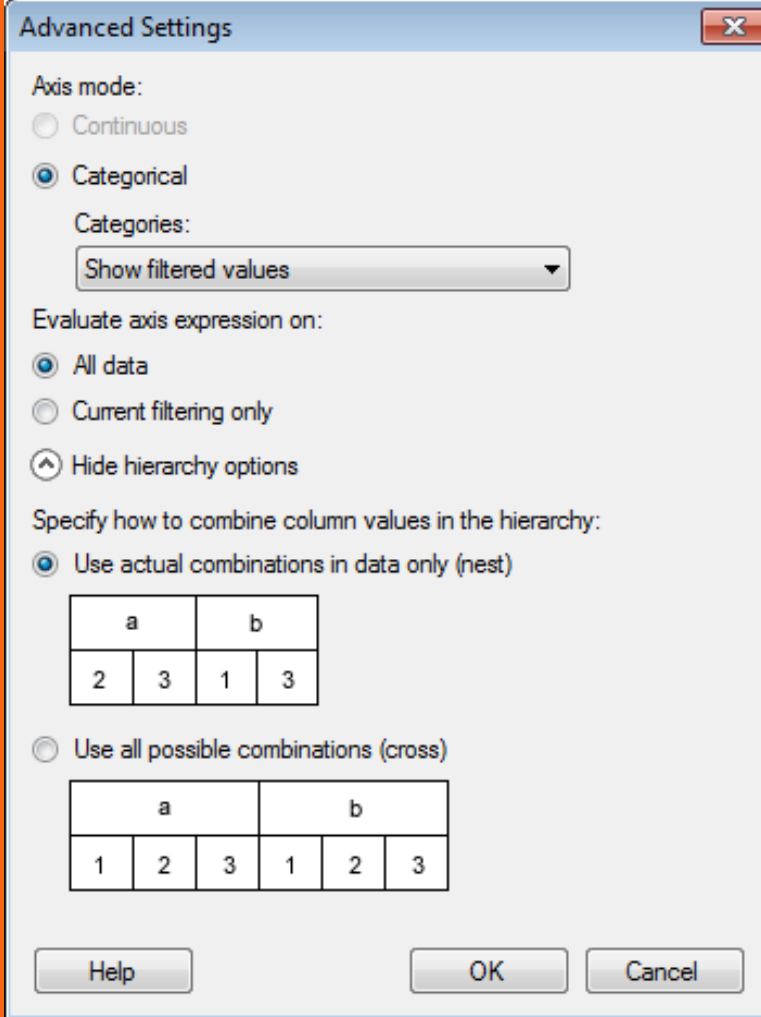
Specifies how many categories will be available, e.g., on an axis or in a list of colors in the legend.

Use actual combinations in data only (nest)

Use this option to display all combinations available in the data.

Use all possible combinations (cross)

Use this option to display all possible combinations, even showing categories that are currently not included in the data.



The image shows a screenshot of the 'Advanced Settings' dialog box. It contains several options for configuring the display of data combinations. The 'Axis mode' section has 'Categorical' selected. The 'Categories' dropdown is set to 'Show filtered values'. The 'Evaluate axis expression on:' section has 'All data' selected. The 'Specify how to combine column values in the hierarchy:' section has 'Use actual combinations in data only (nest)' selected, which is illustrated by a table showing only the combinations present in the data. The 'Use all possible combinations (cross)' option is also shown, with a corresponding table illustrating all possible combinations of categories.

Advanced Settings

Axis mode:

☐ Continuous

☒ Categorical

Categories:

Show filtered values

Evaluate axis expression on:

☒ All data

☐ Current filtering only

☒ Hide hierarchy options

Specify how to combine column values in the hierarchy:

☒ Use actual combinations in data only (nest)

a		b	
2	3	1	3

☐ Use all possible combinations (cross)

a			b		
1	2	3	1	2	3

Help OK Cancel