

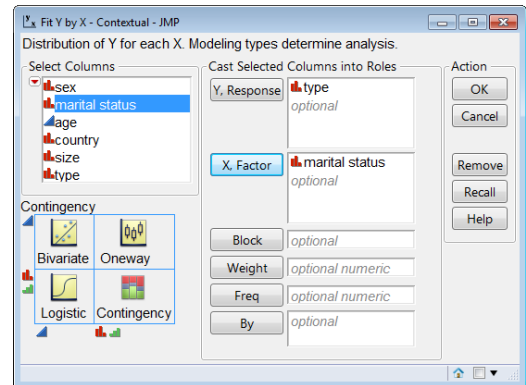
# Mosaic Plot and Contingency Table

Use to examine the relationship between two categorical variables. A contingency table shows the frequency distribution of the variables in a matrix format, while a mosaic plot graphically displays the information.

## The Contingency Table Analysis

1. From an open JMP® data table, select **Analyze > Fit Y by X**.
2. Click on a categorical variable from **Select Columns**, and click **Y, Response** (categorical variables have red or green bars).
3. Click on another categorical variable and click **X, Factor**.
4. Click **OK**. The Contingency Analysis output will display.

Car Poll.jmp (Help > Sample Data Library)

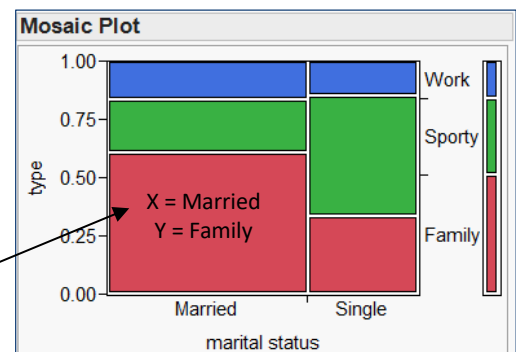


## Mosaic Plot

The mosaic plot is a side-by-side divided bar chart that allows you to visually compare proportions of levels of one variable across the levels of a second variable.

Interpretation:

1. The widths of horizontal bars represent the proportions of the levels of the X variable (in this example, marital status).
2. The heights of vertical bars on the far right represent the proportions of the levels of the Y variable (type).
3. The cells in the plot represent the proportions for every combination of category levels. In this example, Married and Family is the largest overall proportion.



## Contingency Table

The body of the contingency table displays:

- **Count** – the cell frequencies (counts).
- **Total %** - the cell's percentage of the total count.
- **Col %** - the cell's percentage of the count for the column. The column variable is the Y variable, type.
- **Row %** - the cell's percentage of the count for the row. The row variable is the X variable, marital status.

The borders of the contingency table display the column totals (across the bottom), row totals (on the right), and the grand total (lower right corner).

Contingency Table

		type			
		Family	Sporty	Work	
marital status	Count	119	45	32	196
	Total %	39.27	14.85	10.56	64.69
	Col %	76.77	45.00	66.67	
	Row %	60.71	22.96	16.33	
Single	Count	36	55	16	107
	Total %	11.88	18.15	5.28	35.31
	Col %	23.64	55.00	33.33	
	Row %	33.64	51.40	14.95	
		155	100	48	303
		51.16	33.00	15.84	

Legend

Tips:

- Click on the **red triangle next to Contingency Table** to select or deselect display options.
- **Right-click** on the mosaic plot to change colors (**Set Colors**) or label cells (**Cell Labeling**).

Note: See the **Essential Graphing** book (under **Help > Books**) for more details.