# Creating Formulas in JMP®

This page describes two methods for creating formulas in JMP. Formulas are used to create transformed or derived variables using built-in functions, constants and/or existing variables.

Method 1 (Create Formula With Formula Editor)

1. From an open JMP data table, select **Cols > New Column**.
2. Under **Column Name**, assign a name for the column. In this example, we name the column **%profit/sales**.
3. Click **Column Properties**, and select **Formula**. This takes you to the **JMP Formula Editor** (shown at right).
4. To create this formula, we take the ratio and multiply by 100.
   - Select **Profits ($M)** from the **Columns** list.
   - Click on the **divide by** symbol on the **keypad**.
   - Select on **Sales ($)** from the **Columns** list.
   - Click on the **outer gray box** (surrounding the ratio).
   - Click on the **multiply** symbol on the **keypad**.
   - Type "**100**" on your keyboard, and click **OK**. This populates the data table column with the calculated % Profit ($M)/Sales ($M) for each observation.
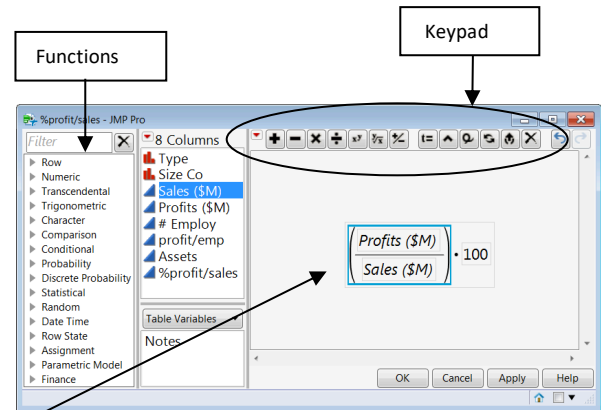
Example: Companies.jmp (Help > Sample Data Library)

Method 2 (Create Formulas Using Temporary Columns)

From any data table in JMP, right-click on a column header or multiple column headers and select **New Formula Column**. Or, from any launch window, right-click on a column name or multiple column names to display and select available formula functions, such as:

- **Transform**: Performs common transformations (shown right).
- **Aggregate**: Provides aggregate measures (e.g., mean).
- **Distributional**: Performs centering and standardization (e.g. z-score).
- **Character**: Provides basic character functions (e.g., concatenate).
- **Combine**: Provides derived measures from selected columns.
- **Random**: Samples with or without replacement from the selected column(s), or generates random uniform or random normal data.
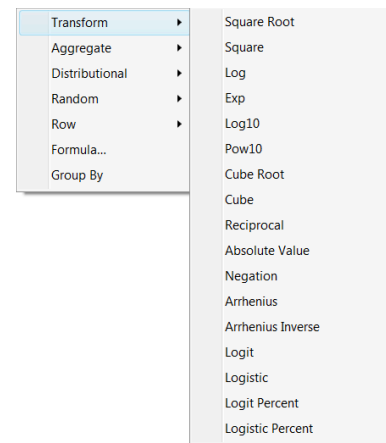
1. **When made from the data table**, the new formula column is saved automatically back to the data table.

2. From **launch windows,** JMP creates a temporary (or virtual) column, which is listed in italics and can be used in the current analysis. To add this temporary column to the data table as a formula column, **right-click** on the column and select **Add to Data Table**. This adds a new column and creates the formula, which is accessible through the Formula Editor.
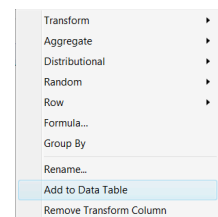
Notes: To access the **Formula Editor** for any column, right-click on the column name and select **Formula**. Common **transformations** are available in the Formula Editor under the **Transcendental** functions category. For more details on creating formulas, search for **Formula Editor** or **Virtual Columns** in JMP Help or in the book *Using JMP* (under **Help > Books**).