# Finding Standardized Values (z-Scores)

This guide demonstrates three methods for calculating standardized values (z-scores) for a continuous variable.

Method 1 (Save Standardized)

1. From an open JMP data table, select **Analyze > Distribution**.
2. Select one or more continuous variables from **Select Columns** and click **Y, Columns**.
3. Click **OK** to generate a histogram and descriptive statistics.
4. Click on the **red triangle** for the variable, and select **Save > Standardized**. A new column of the standardized values will be saved to the data table.
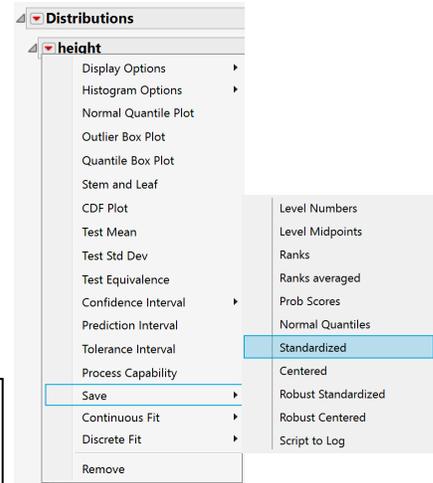
Big Class.jmp (Help > Sample Data Folder**)**

	name	age	sex	height	weight	Std height
1	KATIE	12	F	59	95	-0.836802628
2	LOUISE	12	F	61	123	-0.365364528
3	JANE	12	F	55	74	-1.779678828

The column **Std height** contains z-scores for height.

Method 2 (Instant Formula)

1. From an open JMP data table, right click on the column that you want to standardize and select **New Formula Column > Distributional > Standardize**. A new column of the standardized values will be created in the data table.

To view the formula, right-click on the column header for this new column and select **Formula**.

Method 3 (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.
3. Click **Column Properties**, and select **Formula**. This takes you to the **JMP Formula Editor**.

A standardized value (z-score) is of the form:

$$\frac{Variable - Mean(Variable)}{Standard\ Deviation\ (Variable)}$$

4. Create the formula. This will populate the column in the data table with standardized values for the variable. Below are two ways to create the standardized values in the Formula Editor. All functions in this example can be found under the "Statistical" functions.

$$Col\ Standardize\left(height\right)$$

$$\frac{\left(height - Col\ Mean\left(height\right)\right)}{Col\ Std\ Dev\left(height\right)}$$

Visit **Using JMP > Create Formulas in JMP** in **JMP Help** to learn more.