

Add Formulas to an Object Type

Formulas compile data from numeric and variable values to generate conclusions, such as Incident Severity, Estimated Damage, or Likelihood the Incident Will Recur. Variable data is created from numeric data from other formulas, [select lists](#), [numeric](#) or [date](#) fields, or [workflow states](#) that are added directly to an object type or from object types associated through a [relationship](#) or [reference](#).


A formula can be displayed on a form as a number, label (e.g. Low, Medium, High), numbers and labels, a gauge, or as a formula card. See the [Formulas on Forms](#) article for more information on configuring the display.

For more information on formulas, see the following articles:

- [Formulas Overview](#)
- [Variables, Operators & Functions](#)
- [Time Functions](#)
- [Null Values in Formulas](#)
- [Formula Examples](#)
- [Formulas on Forms](#)

Instructions

To add a formula to an object type:

1. Click the  icon in the top bar > **Object Types** in the **Data Model** section.
2. Click the object type or enter the name of the object type in the **Search** field, then click it to display the **Edit Object Type** page.
3. Click the **Formulas** tab > **Add Formula**.
4. Enter a name for the formula in the **Name** field (e.g. Estimated Vehicle Damage).
5. Click **Create**.
6. Click the new formula to open the **Edit Formula** palette.

EDIT FORMULA
✕

DETAILS

Name

Estimated Vehicle damage

VARIABLES

+ ADD VARIABLE

The Edit Formula palette.

7. Click **Add Variable**.
8. Select either **Field**, **Relationship**, or **Reference** from the **Variable Type** dropdown menu.
 - If you selected **Field**, choose a field or formula from the **Available Components** dropdown menu. The options in this dropdown are fields or formulas added directly to the object type.
 - If you selected **Relationship** or **Reference**:
 - a. Select a relationship or reference saved to the object type from the **Relationship** or **Reference** dropdown menu.
 - b. Select a field, formula, or workflow state from the **Available Components** dropdown menu. These are the fields, formulas, or states saved to the object type(s) in the relationship or reference.
 - c. Select a variable sub-type from the **Sub Type** dropdown menu to specify how the data from multiple objects will be compiled, calculated, and displayed. See the [Variables, Operators & Functions](#) article for more information on the sub-types and relationship/reference variables.

Select lists can be used in formulas only if numeric values have been added to their options. See the [Select List Fields](#) article for more information.

9. **Optional:** If you wish to use a name other than the field's unique name, enter it in the **Name** field. Numbers, special characters, and spaces are not permitted.

▲ Naming a variable after a function will result in an error.

10. **Optional:** Enter a description of the variable in the **Description** field, which will appear below the variable in the **Edit Formula** panel.

VARIABLES

Variable Type	Relationship
Relationship	Vehicles Involved
	Available Components
	Blue Book Value
	Sub Type
	Array
Name	Description
BLUEBOOKVA	
<input type="checkbox"/>	Treat empty values as Null

CANCEL ✓ CREATE

A new variable in the Edit Formula panel.

11. **Optional:** Select the **Treat empty values as Null** checkbox if objects with blank variables should **not** be assigned a zero (0) value. See the [Null Values in Formulas](#) article for more information.
12. Click **Create**.
13. Follow steps 8-12 above to continue adding more variables as needed.
14. Using the variable name(s), enter the formula, including any operators and/or functions, in the **Formula** field (e.g. **SUM(BLUBOOKVA)**). See the [Variables, Operators & Functions](#) article for more information.

VARIABLES

+ ADD VARIABLE

BLUEBOOKVA RELATIONSHIP ARRAY ✕

Field: Blue Book Value

FORMULA

↻

A formula entered in the Formula field using the variable name(s) (in this case, BLUEBOOKVA).

15. In the **Display** section, select either **None** or **Numeric** from the **Format** dropdown menu. If you selected **Numeric**, you can choose how the numbers will be displayed by clicking an option in the table to the left (i.e., **Num**, **%**, **0.00**, etc). A preview of the number format is displayed in the **Layout** field.

DISPLAY

Format

Numeric[▼]

Layout

0

Num	%	\$	0.00
-Num	-%	-\$	-0.00



Range as

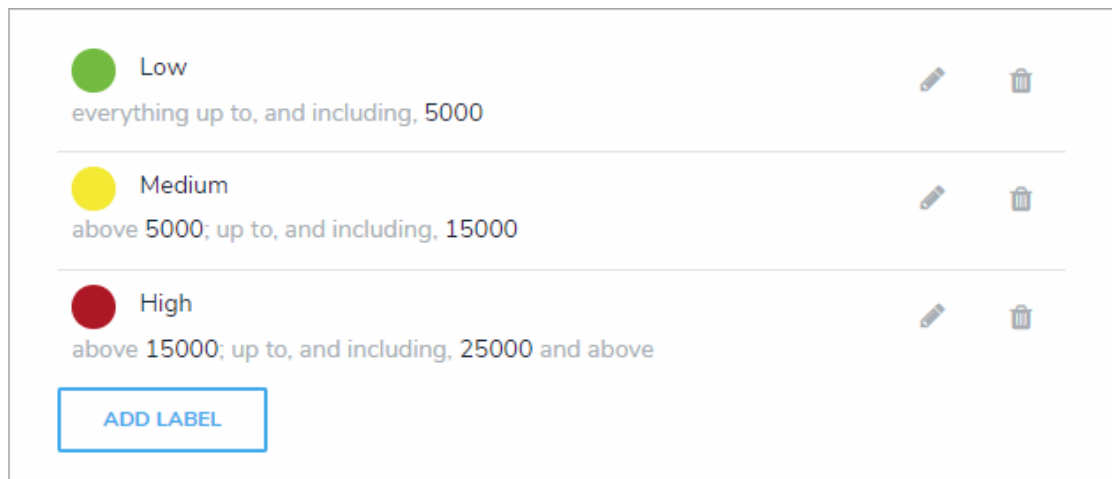
None[▼]

↻


The display options for formulas. Selecting an option other than None in the Range as dropdown will reveal additional options.

16. Select an option from the **Range as** dropdown menu:
- **None:** The formula will display the numeric results only.
 - **Label:** The formula will display the range labels only (e.g. Low) in the color selected for that range.
 - **Label and Result:** The formula will display the numeric results and labels (e.g. Low – 1000) in the color selected for that range.
 - **Result:** The formula will display the numeric results only in the color selected for that range.
17. If you selected any option other than **None** in the **Range as** dropdown menu above, formula labels of **Low**, **Medium**, and **High** are automatically created. To configure the labels:
- a. Click the icon next to the range you want to edit.
 - b. Click the **Color** dropdown menu to reveal the color picker and select a new color for the label. You can also type a hex color into this field to select a color.

- c. Enter a new name for the label in the **Label** field.
- d. Enter a numeric maximum value in the **Max Value** field.
- e. Click the  to save your changes.
- f. To delete a range, click the  icon.
- g. To add a new label, click **Add Label**, then follow steps b-e above.



The default formula labels.

18. Click **Done**.
19. To edit the formula, click it in the tab to open its settings.
20. To delete the formula, click the  icon.
21. Click **Done** when finished.



If changes are made to the display of an existing formula, you must click **Reformat Formulas** from the **Edit Object Type** page before those changes are displayed.



Clicking **Recalculate Formulas** recalculates **all** the formulas in your organization. As such, this action should be performed only when required.