

How do I perform calculations?

Calculated Fields allow real-time calculations on data entry forms or surveys. Because calculations can slow web performance, they should be used judiciously. This FAQ will provide examples of: (1.) sum functions, (2.) the “+” function, (3.) conditional logic, and (4.) calculations based on check box fields.

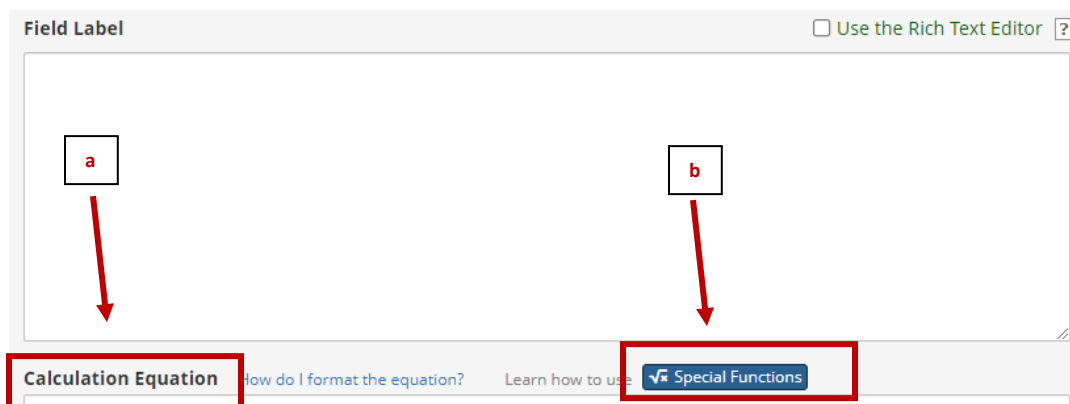
1. Within the ‘Designer’ in the left navigation menu, create a new field by selecting **Field Type:**

Pro Tip: Calculated fields only result in numbers. For calculations that result in text (e.g. TRUE/FALSE), please refer to [FAQ: ACTION TAGS: CALCULATE TEXT](#). For calculations that result in a date, refer to [FAQ: ACTION TAGS: CALCULATE DATE](#).

Calculated Field:

Field Type:

- a. Add a descriptive field label, then create the equation in the ‘**Calculation Equation**’ box.
- b. For a detailed list of functions that can be used, click on the blue ‘**Special Functions**’ button.



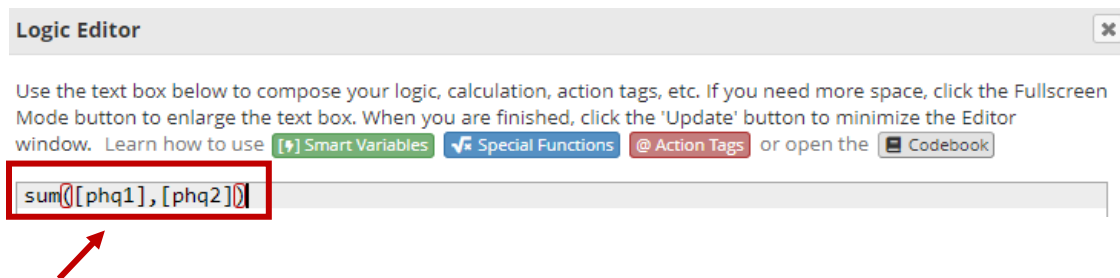
The screenshot shows the 'Field Label' section with a text input field. Below it is the 'Calculation Equation' section, which includes a text input field and a 'Special Functions' button. Red boxes highlight the 'Calculation Equation' input and the 'Special Functions' button. Red arrows point from boxes labeled 'a' and 'b' to these respective elements.

2. Once you have created your calculated field, test it by creating simulated records. There is also an option to test the calculation using existing records within the Add/Edit Field pop-up.




Test calculation with a record:

Example #1: Using the “sum” function.

To sum fields regardless of fields having data, use the syntax `sum([var1],[var2],[var3])`.



The logic in the example above will return a calculation, even if a field has missing data:

PHQ-2					
Over the last 2 weeks, how often have you been bothered by the following problems?					
		Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling down, depressed or hopeless		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PHQ-2 Score		<input type="text" value="1"/>		View equation	


Example #2: Using the “+” function.

To sum fields only when all fields have data, use the “+” function:

Logic Editor ✕

Use the text box below to compose your logic, calculation, action tags, etc. If you need more space, click the Fullscreen Mode button to enlarge the text box. When you are finished, click the 'Update' button to minimize the Editor window. Learn how to use [Smart Variables](#) [Special Functions](#) [@ Action Tags](#) or open the [Codebook](#)

[phq1]+[phq2]



The logic in the example above will return a calculation ONLY if both fields have data, otherwise the calculated field will remain blank as shown below:

PHQ-2 Over the last 2 weeks, how often have you been bothered by the following problems?					
		Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling down, depressed or hopeless		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PHQ-2 Score		<input type="text"/>			View equation

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Example #3: Incorporating conditional logic.

Conditional logic is useful when you want to disregard a response. For example, when your responses include an N/A option. Use the 'if' function for incorporating conditional logic. The 'if' function has the syntax if (x,y,z), where if x is true, then y, else z.

Logic Editor ✕







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```
if ([phq1] <> '99' AND [phq2] <> '99'), [phq1]+[phq2], ""
```



The logic in this example will result in a calculation only when neither variable is equal to '99' (N/A).

PHQ-2
Over the last 2 weeks, how often have you been bothered by the following problems?

		Not at all	Several days	More than half the days	Nearly every day	N/A
Little interest or pleasure in doing things	 	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling down, depressed or hopeless	 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
PHQ-2 Score	 	<input type="text"/>			View equation	

If you have an error in your calculated field involving branching logic, refer to [FAQ: CALCULATED FIELD ERROR](#).

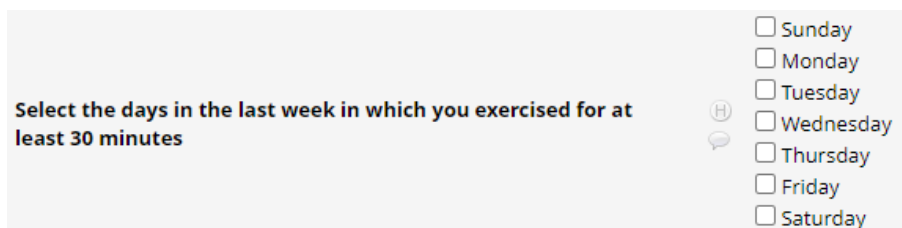
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Example #4: Performing calculations on checkbox fields.

Checkbox fields are unique in that each answer for the question is considered a variable. Each option has a value of 1 when checked and 0 when unchecked.

When using checkbox fields in calculation, you will need to include the code with the field name.

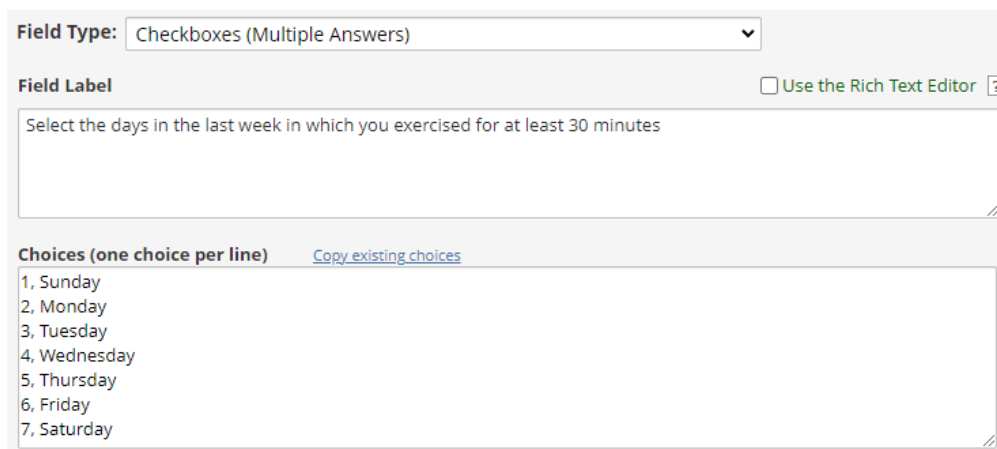
Example:



Select the days in the last week in which you exercised for at least 30 minutes

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Below are the field choices for the checkbox field [days_exercise].



Field Type: Checkboxes (Multiple Answers)

Field Label: Select the days in the last week in which you exercised for at least 30 minutes

Choices (one choice per line):

- 1, Sunday
- 2, Monday
- 3, Tuesday
- 4, Wednesday
- 5, Thursday
- 6, Friday
- 7, Saturday

Notice the code for each option. These codes (1, 2, 3, 4...) are paired with the field name to count each response in the calculation.

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Example #4 (cont'd): Performing calculations on checkbox fields

The equation below adds the checkbox options to calculate the number of days selected. Notice that the code for each option is included with the field name.

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$$[days_exercise(1)] + [days_exercise(2)] + [days_exercise(3)] + [days_exercise(4)] + [days_exercise(5)] + [days_exercise(6)] + [days_exercise(7)]$$

Once completed, the data entry form will look like this:

Select the days in the last week in which you exercised for at least 30 minutes

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Total number of days per week participant exercised for at least 30 minutes

4 View equation