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:

   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.

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.
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:
Example #2: Using the “+” function.

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

```
[[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:
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.

```
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).

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

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

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.
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.

```
[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: