Formula Logic

CIAS supports most mathematical, comparison, & logical operators in formulas. This logic can be used anywhere that you can apply a formula, including branching, reporting dashboard, reports, reflections, SMS & session scheduling.

Mathematical operators: + , - , * , /
Mathematical operator formulas will return a number (n)

- **Addition (+)**
  [variable 1] **+** [variable 2] = n

- **Subtraction (-)**
  [variable 1] **-** [variable 2] = n

- **Multiplication (*)**
  [variable 1] ***** [variable 2] = n

- **Division (/)**
  [variable 1] **/** [variable 2] = n

Comparison operators: <, > , <= , >= , <> , != , =
Comparison operator formulas will return a boolean value (TRUE/FALSE)

- **Greater than (<), Less than (>)**
  [variable 1] **<** n = TRUE

- **Greater than or equal to (<=), Less than or equal to (>=)**
  [variable 1] **>=** n = TRUE

- **Different (<>)**
  [variable 1] **<>** n = False

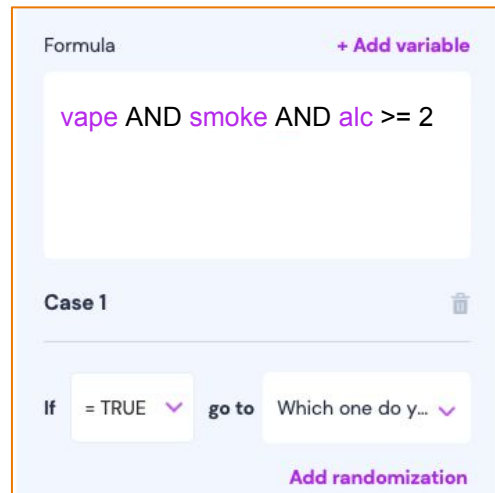- **Equal to (=), Not equal to (!=)**
  [variable 1] **!=** n = TRUE

Logical operators: AND , OR
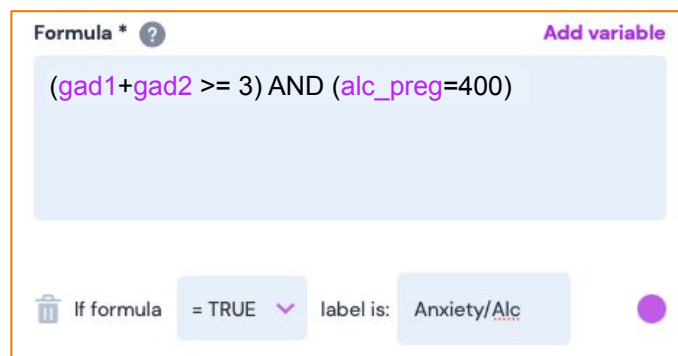logical operator formulas will return a boolean value (TRUE/FALSE)

- **AND** (all conditions should be true)
  ([variable 1] > n) **AND** ([variable 2] <n) = TRUE

  ([variable 1] > n) **AND** ([variable 2] <n) = FALSE

- **OR** (at least one condition should be true)
  ([variable 1] > n) **OR** ([variable 2] <n) = TRUE

  ([variable 1] > #) **OR** ([variable 2] <#) = FALSE

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Formula Logic Examples and Use Cases

If a participant endorses more than one item (vaping, smoking, and alcohol use), the logical operator, **AND**, can be used to branch to a screen that asks which topic they want to focus on.

Formula | + Add variable

> vape AND smoke AND alc >= 2

Case 1 🗑

If [= TRUE ∨] **go to** [Which one do y... ∨]

Add randomization

To display information on the reporting dashboard for participants who screen positive on an abbreviated anxiety screener (gad1 and gad2), **AND** endorse alcohol use while pregnant (alc_preg).

Formula * ❓ | Add variable

> (gad1+gad2 >= 3) AND (alc_preg=400)

🗑 If formula [= TRUE ∨] label is: [Anxiety/Alc] 🟣

The logical operator, **OR**, can be used in reports to display text for participants who indicated wanted to cut down on substance use (vape_concern, smoke_concern, alc_concern).

Formula | Add variable

> vape_concern OR smoke_concern OR alc_concern

Case 1
If formula =1

🔘 Preview this case ✋ ⌃

🗑 If formula [= ∨] [1]

Section Title ⬜

The text in the report is: | + Add variable

> This patient wants to cut down on their substance of choice because they have health concerns