**[Operators](https://docs.opendatakit.org/form-operators-functions/" \l "id20)**

[**Math operators**](https://docs.opendatakit.org/form-operators-functions/#id21)

|  | **Explanation** | **Example** |
| --- | --- | --- |
| + | addition | ${salary\_income} + ${self\_employed\_income} |
| - | subtraction | ${income} - ${expenses} |
| \* | multiplication | ${bill} \* 1.18 |
| div | division | ${percent\_int} div 100 |
| mod | [modulo](https://en.wikipedia.org/wiki/Modulo_operation) (division remainder) | (${even\_number} mod 2) = 0 |

**Warning**

Math operators only work with numbers.

* The addition operator cannot be used to concatenate strings. Use the [**concat()**](https://docs.opendatakit.org/form-operators-functions/#concat) function instead.
* Empty values (that is, [variables](https://docs.opendatakit.org/form-logic/#variables) referencing unanswered questions) are actually empty strings, [and will not be automatically converted to zero (0)](https://docs.opendatakit.org/form-logic/#empty-values).

[**Comparison operators**](https://docs.opendatakit.org/form-operators-functions/#id22)

Comparison operators are used to compare values. The result of a comparison is always True or False.

|  | **Explanation** | **Example** | **Notes** |
| --- | --- | --- | --- |
| = | equal to | ${enrolled} = 'yes' | Can compare numbers or strings. |
| != | not equal to | ${enrolled} != 'yes' | Can compare numbers or strings. |
| > | greater than | ${age} > 17 |  |
| >= | greater than or equal to | ${age} >= 18 |  |
| < | less than | ${age} < 65 |  |
| <= | less than or equal to | ${age} <= 64 |  |

**Warning**

* The relational operators (>, >=, <, <=) only work with numbers.
* [Empty response values are not automatically converted to zero (0)](https://docs.opendatakit.org/form-logic/#empty-values).

[**Boolean operators**](https://docs.opendatakit.org/form-operators-functions/#id23)

Boolean operators combine two True or False values into a single True or False value.

|  | **Explanation** | **Example** |
| --- | --- | --- |
| and | True if the expressions before and after are True | ${age} > -1 and ${age} < 120 |
| or | True if either of the expressions before or after are True | ${age} < 19 or ${age} > 64 |

[**Path operators**](https://docs.opendatakit.org/form-operators-functions/#id24)

|  | **Explanation** | **Example** | **Notes** |
| --- | --- | --- | --- |
| . | current question's value | . >= 18 | Used in [constraints](https://docs.opendatakit.org/form-logic/#constraints). |
| .. | current question's parent group | position(..) | Used with [**position()**](https://docs.opendatakit.org/form-operators-functions/#position) to get the iteration index. |