

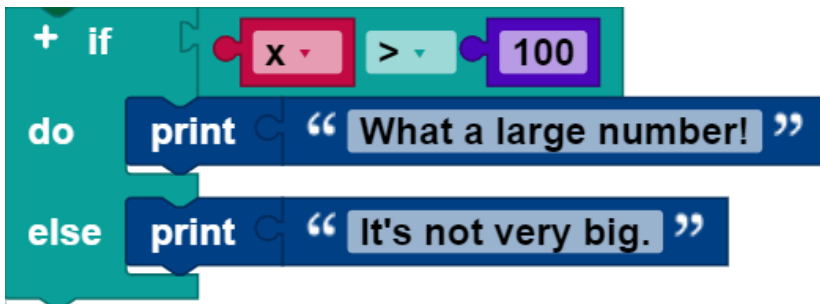
Logic

Boolean logic is a simple mathematical system with two values:

- **true**
- **incorrect**

Logic blocks in ROBO Pro Coding are generally there to control conditions and loops.

Here is an example:



If the value of x is not greater than 100, then the condition is false, and “It’s not very big.” is output. If the value of x is not greater than 100, then the condition is false and “It’s not very big.” is output. Boolean values can also be saved in variables and transmitted to functions, just like numbers, texts, and list values.

Blocks

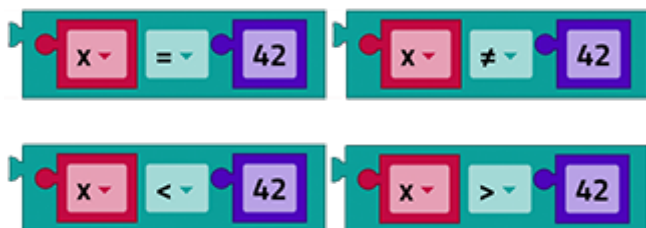
If a block expects a Boolean value as an input, then no input will be interpreted as **false**. Non-Boolean values cannot be inserted directly where Boolean values are expected, although it is possible (but not advisable) to save a non-Boolean value in a variable and then insert this into the condition input. This method is not recommended, and its behavior can change in future versions of ROBO Pro Coding.

Values

An individual block with a drop down list that either indicates **true** or **false** can be used to access a Boolean value:

Comparative operators

There are six comparative operators. Two inputs are entered into each (normally two numbers), and the comparative operator returns **true** or **false**, depending on how the inputs are compared to one another.





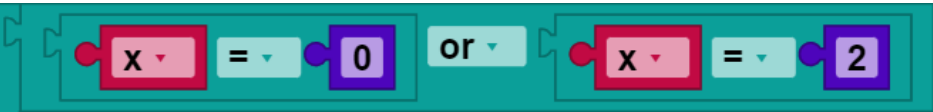
The six operators are: equal, not equal, less than, greater than, less than or equal, greater than or equal.

Logical operators

The **and** block returns **true** if and only if its two input values are true.



The **or** block returns **true** if at least one of its two input values is true.



do

The **not** block converts a Boolean input into its opposite. For example, the result of:



is **false**.

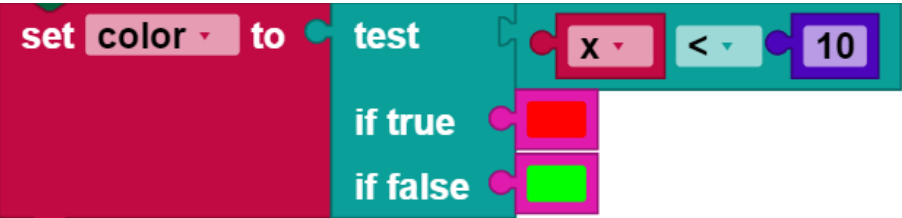
If there is no input, then the value **true** is assumed, so that the following block will generate the value **false**:



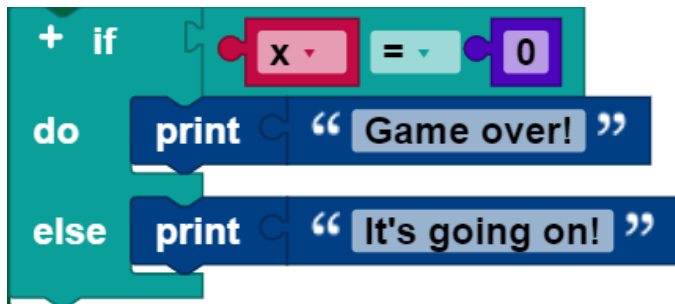
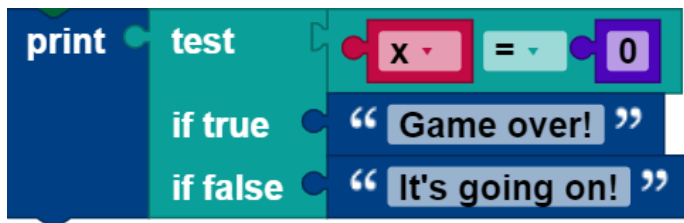
However, leaving an input empty is not recommended.

Three-part operator

The three-part operator acts like a miniature **if do** block. It uses three input values The first Boolean condition to be tested is the first input value, the second input value is the value returned if the test is **true**, and the third input value is the value returned if the test is false. In the following example, the variable **color** is set to red if the variable **x** is less than 10, otherwise the variable **color** is set to green.



A three-part block can always be replaced by an **if do** block. The following two examples are just the same.



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