# Comparison Operators with Equations

The following examples demonstrate how to use comparison operators with the data types **int** (integers, whole numbers) and **float** (number with a decimal point or fractional value). Comparison operators return Boolean results. As you learned previously, Boolean is a data type that can hold only one of two values: **True** or **False**.

The comparison operators include:

* **==** (equality)
* **!=** (not equal to)
* **>** (greater than)
* **<** (less than)
* **>=** (greater than or equal to)
* **<=** (less than or equal to)

**Key takeaways**

Python comparison operators return Boolean results: **True** or **False**.

| **Symbol** | **Name** | **Expression** | **Description** |
| --- | --- | --- | --- |
| **==** | Equality operator | a == b | a is equal to b |
| **!=** | Not equal to operator | a != b | a is **not** equal to b |
| **>** | Greater than operator | a > b | a is larger than b |
| **>=** | Greater than or equal to operator | a >= b | a is larger than or equal to b |
| **<** | Less than operator | a < b | a is smaller than b |
| **<=** | Less than or equal to operator | a <= b | a is smaller than or equal to b |

**Resources for more information**

For more information about the concepts covered in these practice exercises, please visit:

* [Order of Operations](https://www.mathsisfun.com/operation-order-pemdas.html) - A refresher on the mathematical Order of Operations.
* [Python Comparison Operators with Syntax and Example](https://data-flair.training/blogs/python-comparison-operators/) - Provides examples of more complex comparisons.
* [Raise numbers to a power: here’s how to exponentiate in Python](https://kodify.net/python/math/exponents/) - Explains multiple methods for calculating exponents in Python.