Python Relational Operators   
The result of relational comparisons for numbers and variables is True or False, and based on the result, your program can take different actions to accomplish a given task; for instance, a store may offer free shipping depending on the amount spent.

Here are comparison operators by name and symbol.

|  |  |
| --- | --- |
| Name | Operator |
| Less than | < |
| Greater than | > |
| Equal | == |
| Not equal | != |
| Greater than or equal to | >= |
| Less than or equal to | <= |

Each operator has operands on both sides: operand1 operator operand2; the operand maybe a variable, such as number\_of\_girls or a number, such as 10, and the result of the comparison is either True or False.

Example 1:  
Recall that when Python executes this statement, number\_of\_girls = 8, it stores 8 in a memory location and associate number\_of\_girls with it. So, in the comparison, number\_of\_girls < 8, Python compares the number, 8, with the value at the memory location where the value for number\_of\_girls is stored, which is also 8.

number\_of\_girls = 8  
number\_of\_girls < 8   
is False because number\_of\_girls is not less than the number 8.  
Note that the equal, ==, and assignment, =, are sometimes mistaken for each other. The == operator checks if both operands are the same, but = is assignment.

Example 2:  
number\_of\_girls = 8  
number\_of\_girls > 8   
is False because number\_of\_girls is not greater than 8.

Example 3:  
number\_of\_girls = 8  
number\_of\_girls != 8   
is False because number\_of\_girls is 8.

Example 4:  
number\_of\_girls = 8  
number\_of\_girls == 8   
is True because number\_of\_girls is 8.

Example 5:  
number\_of\_girls = 8  
number\_of\_girls <= 8   
is True because number\_of\_girls is less than or equal to 8.

Example 6:  
number\_of\_girls = 8  
number\_of\_girls >= 8   
is True because number\_of\_girls is greater than or equal to 8.

**Assignment:**From the Python primary prompt, after you enter each comparison operation, Python displays the result.

1.  
>>> a = 5  
>>> b = 4  
>>> a < b

2.  
>>> a = 5  
>>> b = 4  
>>> a == b

From the Python primary prompt, after you enter each comparison operation, type y and press Enter to display the result.

3.  
>>> a = 5  
>>> b = 4  
>>> y = a > b  
>>> y

4.  
>>> a = 5  
>>> b = 4  
>>> y = a != b  
>>> y