

The assignment operator =

The assignment operator is an extremely important concept in programming. It is very different from what you learn in math class.

The “equals sign” = does not mean equals. What = means is

“take everything on the right hand side and put it into the variable on the left hand side”

`x = 5;` means copy 5 into the variable x.

`5 = x;` **this is illegal**

`x = x + 3;` means take the value of x, add 3 to it, and store the result back into x.
i.e. add 3 to x.

This can also be written as `x += 3;`

`x = y;`

`y = x;` These two statements are completely different (unlike math).

Let's assume that x = 5 and y = 10;

`x = y;` --> they now both contain 10

OR

`y = x;` --> they now both contain 5

`x = x + y;` valid statement

`x + y = x;` **illegal statement.** The left side must be a single variable.

To check if two numbers are equal you have to use ==

== does not set anything equal to anything,
rather it is the answer to a question: “Are these two things equal?”

== will always return a true or a false value.

```
if (x == 13) {      <-- IS x equal to 13 ?
    System.out.print("You are unlucky");
}
```