

EXPRESSIONS

and

STATEMENTS

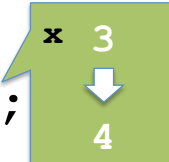
Expressions and Statements

- Assume $x=3$

- Expression

$x+2$ 

- Statement

$x=x+1;$ 

Expressions and Statements

- Assume $x=3$

- Expression

$x+2$

5

Evaluates
(has a value)

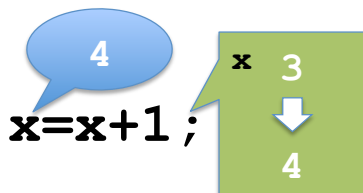
- Statement

$x=x+1 ;$

x 3
↓
4

Produces an effect
(does something)

Statement with Value?



$y=x=x+1 ;$

$y=(x=x+1) ;$

4

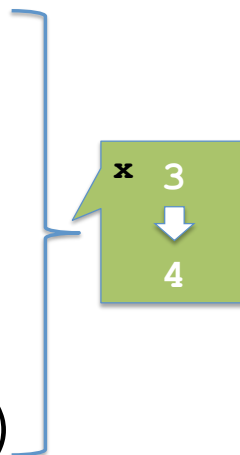
$\begin{cases} x=x+1 ; \\ y=x ; \end{cases}$

Increment **x**

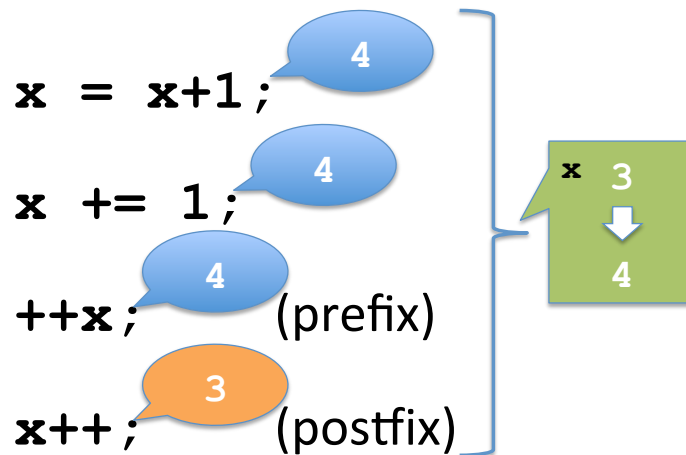
x = x+1;	x += 1;
	x -= 2;
x += 1;	x *= 3;
	x /= 4;
	x %= 5;

Increment **x** by 1

x = x+1;	
x += 1;	
++x;	(prefix)
x++;	(postfix)



Increment **x** by 1



Pre- and Post-fix Increment

`x=3;`

`y=++x;`

`z=x++;`

x	y	z
3		
4	4	
5		4

`x=3;`

`x=x+1; y=x;`

`z=x; x=x+1;`

Summary

- Expression: has **value**
- Statement: **does** sth



++x; **value** after **increment**

x++; **value** before **increment**



Source: Wikipedia