

# *Python Operators*

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An operator is a symbol of some kind which represents an operation to be carried out on two data items.

All programming languages contain basic operators.

# Arithmetic Operators

Used to do basic maths operations.

+	Addition	$2 + 4$
-	Subtraction	$2 - 4$
*	Multiplication	$2 * 4$
/	Division	$4 / 2$
%	Modulo division	$4 \% 2$
**		$4 ** 2$
//	Floor division	$4 // 2$

# Arithmetic Operators

**Modulo division** – divides and returns the remainder only (surprisingly useful...):

$5 \% 2 = 1$  because  $5/2$  is 2 with 1 remainder

In pseudocode MOD is used:  $5 \text{ MOD } 2$

# Arithmetic Operators

**Floor division** – divides and rounds down.  
Also known as integer division. Always rounds **down**

$5 // 2 = 2$  because  $5/2$  is 2 with 1 remainder

In pseudocode  $\backslash$  is used:  $5 \backslash 2$

# Arithmetic Operators

**Exponential** – raises the number to the power:

$5 ** 2 = 25$  because 5 squared is 25

$5 ** 3 = 125$  because 5 cubed is 125

In pseudocode  $\wedge$  is used:  $5 \wedge 2$

# Comparison Operators

Used to do basic comparative operations. Return a **Boolean** value (True or False). Used within Comparative Statements (IF statements)

==	Comparative (equal to)	2 == 4
!=	Not equal to	2 != 4
>	Greater than	2 > 4
<	Less than	2 < 4
>=	Greater or equal	2 >= 4
<=	Less or equal	2 <= 4

# String Operators

Basic string operators. The string function library also contains all sorts of useful things to do with strings...

+	Concatenation (joins)	"Hello" + "World"
*	Repeats	repeatHello = "hello" * 10

A string is a sequence of characters.