First Programming Concepts Cheat Sheet

*Functions and Keywords*

Functions and keywords are the *building blocks of a language’s syntax.*

Functions are pieces of code that perform a unit of work. In the examples we've seen so far, we've only encountered the print() function, which prints a message to the screen. We'll learn about a lot of other functions in later lessons but, if you're too curious to wait until then, you can discover all the functions available [here](https://docs.python.org/3/library/functions.html).

Keywords are reserved words that are used to construct instructions. We briefly encountered for and in in our first Python example, and we'll use a bunch of other keywords as we go through the course. For reference, these are all the reserved keywords:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| False | class | finally | is | return |
| None | continue | for | lambda | try |
| True | def | from | nonlocal | while |
| and | del | global | not | with |
| as | elif | if | or | yield |
| assert | else | import | pass |  |
| break | except | in | raise |  |

You don't need to learn this list; we'll dive into each keyword as we encounter them. In the meantime, you can see examples of keyword usage [here](https://www.programiz.com/python-programming/keyword-list).

**Arithmetic operators**

Python can operate with numbers using the usual mathematical operators, and some special operators, too. These are all of them (we'll explore the last two in later videos).

* **a + b**= Adds a and b
* **a - b** = Subtracts b from a
* **a \* b** = Multiplies a and b
* **a / b** = Divides a by b
* **a \*\* b** = *Elevates a to the power of b.* For non integer values of b, this becomes a root (i.e. a\*\*(1/2) is the square root of a)
* **a // b** = The integer part of the integer division of a by b
* **a % b** = The remainder part of the integer division of a by b