# Basics

What is Higher Order Function

In [mathematics](https://en.wikipedia.org/wiki/Mathematics) and [computer science](https://en.wikipedia.org/wiki/Computer_science), a **higher-order function** is a [function](https://en.wikipedia.org/wiki/Function_(mathematics)) that does at least one of the following:

* takes one or more functions as arguments (i.e. [procedural parameters](https://en.wikipedia.org/wiki/Procedural_parameter)),
* returns a function as its result.

All other functions are *first-order functions*

First-Class Objects

In Python, functions are [first-class objects](https://dbader.org/blog/python-first-class-functions). This means that **functions can be passed around and used as arguments**, just like [any other object (string, int, float, list, and so on)](https://realpython.com/python-data-types/).

Inner Functions

It’s possible to **define functions inside other functions**. Such functions are called [inner functions](https://realpython.com/inner-functions-what-are-they-good-for/).