

Objectives

List of objectives for Module 9L - Operations on Functions.

Order of Operations - this tells us the order that we operate on numbers. This could be operating on a single number (e.g., 3^2 , where “squared” is operating on the number 3) or between two numbers (e.g., $3 * 2$, where “multiplying” is operating on the numbers 3 and 2). But we don’t have to **just** operate on numbers! In fact, we’ve been operating on functions since Module 4 - Quadratic Functions. When we thought about how to graph a quadratic function, we could think about the parent function, x^2 , and think about how the vertex is shifted and if the graph should be flipped (based on the leading coefficient). Shifting and flipping a function are ways we can operate on a function - we take a function and change it in a prescribed way. This Module will work through other ways we can operate on functions: adding/subtracting/multiplying/dividing, composing, and inverting.

The objectives for this Module are:

- (a) Identify the domain after operating $(+, -, \times, \div)$ on functions.
- (b) Evaluate the composition of two functions.
- (c) Determine whether a function is 1-1.
- (d) Find the inverse of a function, if it exists.