Vocabulary: Translating and Scaling Functions



**Vocabulary**



* Amplitude – half the distance between the maximum and minimum *y*-values of a periodic function.
	+ For example, the function *y* = 4 sin(*x*) + 3, shown to the right, has an amplitude of 4.
* Parent function – the basic form of a function in a family of functions.
	+ For example, the parent function of *y* = 4 sin(*x*) + 3 is *y* = sin(*x*).
* Periodic function – a function with *y*-values that repeat at constant intervals.
* Scale (a function) – to stretch or shrink a graph by multiplying the *x*- or *y*-values of a function by a constant.
	+ For example, the graph of *y* = 4 sin(*x*) + 3, shown above, has been vertically scaled (stretched) by a factor of 4.

* Transform (a function) – to scale, translate, rotate, or reflect the graph of a function.
* Translate (a function) – to shift a graph by increasing or decreasing the *x*- or *y*-values of a function by a constant.
	+ For example, the graph of *y* = 4 sin(*x*) + 3, shown above, has been translated up by 3 units.