

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.

