

Chapter 6: Periodic Functions

Section 6.1 Sinusoidal Graphs

The London Eye is a huge Ferris wheel with a diameter of 135 m (443 ft) in London, England, which completes one rotation every 30 minutes. It is clear that it completes one rotation or revolution and then repeats this revolution over and over.

We can say it has a period of 30 minutes. In this section we will graph the riders height above ground over time and express this height as a function of time.

Periodic Functions is a function for which a specific horizontal shift, P , results in the original function $f(x+P) = f(x)$ for all values of x . When this occurs we call the smallest such horizontal shift with $P > 0$ the period of the function.

4 Major Parts of Trig Graphs

$$f(x) = a \sin((b\theta + c) + d)$$

a = amplitude

c = phase shift / horizontal shift

b = period

d = vertical shift