## VOCABULARY

amplitude
asymptotes
cosecant
cosine
cotangent
domain
even function
frequency
hypotenuse
identity
odd function
period of a function
periodic function
the maximum displacement from the horizontal line of symmetry for the sine and cosine functions
lines that a graph approaches but never touches the trigonometric ratio of hypotenuse over opposite side for an acute angle in a right triangle; the reciprocal of the sine function the trigonometric ratio of adjacent side over hypotenuse for an acute angle in a right triangle
the trigonometric ratio of adjacent side over opposite side for an acute angle in a right triangle; the reciprocal of the tangent function the set of first coordinates in a relation; the set of independent variable (x) values

A function that satisfies the property $f(-x)=f(x)$ the number of times the pattern in the graph repeats within $2 \pi$ for the sine, cosine, and their reciprocal functions, or within $\pi$ for the tangent and cotangent functions; in physics, the number of waves (vibrations, revolutions, or cycles) that pass a given point per unit of time the longest side of a right triangle; the side that is opposite the right angle
an equation that is true for all values of the given variable A function that satisfies the property $f(-x)=-f(x)$ the displacement of $x$ at which the graph of a function begins to repeat
a function that repeats a pattern over its domain

| phase shift | the displacement of the graph of a trigonometric function to the left or |
| :--- | :--- |
| right |  |
| radian | the measure of a central angle whose intercepted arc length is equal |
| to the radius; a radian is approximately 57.3 degrees |  |
| the set of second coordinates in a relation; the set of dependent |  |
| range | variable $(y)$ values <br> the acute angle formed between the terminal side of an angle and the |
| reference angle |  |
| secant | the trigonometric ratio of hypotenuse over adjacent side for an acute |
| angle in a right triangle; the reciprocal of the cosine function |  |
| the trigonometric ratio of opposite side over hypotenuse for an acute |  |
| angle in a right triangle |  |
| sinusoidal function | a function that can be graphed by using transformations of the sine |
| function; functions of the form $y=A s i n B(x-C)+D$ |  |

## Vocab Arcade

## Lesson 12

Variation Rules Reviewed

