

## Pelham Trigonometry Vocabulary

Sine: The ratio of the side opposite to an acute angle and a hypotenuse of a right triangle.

Cosine: The ratio of the side adjacent to an acute angle in the hypotenuse of a right triangle.

Tangent: The ratio of the side opposite of an acute angle and the side adjacent to that acute angle in a right triangle.

Cosecant: The reciprocal of Sine.

Secant: the reciprocal of cosine.

Cotangent: the reciprocal of tangent.

Arcsine: the inverse function of sine (not the inverse of the sine).

Arccosine: the inverse function of cosine. (Not the inverse of the cosine)

Arctangent: the inverse function of tangent. (Not the inverse of the tangent)

Arccosecant: the inverse function of cosecant. (Not the inverse of the cosecant)

Arcsecant: the inverse function of secant. (Not the inverse of the secant)

Arccotangent: the inverse function of cotangent (not the inverse of cotangent)

Adjacent: next to; neighboring

argument of a vector: the angle describing the direction of the vector.

Bearing: a method of indicating direction.

Initial side: the Ray that begins the angle.

Terminating side: the Ray terminates the angle.

Co terminal angles: angles that share the same terminal side and are therefore separated by  $360^\circ$ .

Co-function identities: trig identities showing the relationship between sine and cosine, tangent and cotangent, secant and cosecant. The value of a trig function of an angle equals the value of the co-function of the complement of that angle.

Degree: a unit of angle measure equal to  $1/360^{\text{th}}$  of a circle.

Minute: a unit of angle measure equal to  $1/60^{\text{th}}$  of a degree.

Second: a unit of angle measure equal to  $1/60^{\text{th}}$  of a minute.

Radian: a unit for measuring angles, where  $180^\circ$  equals pi radians.

Periodic function: a function, which has a graph that repeats itself identically over and over.

Period of a periodic function: the horizontal distance required for the graph of a periodic function to complete one cycle.

Reference angle: for any given angle, it's reference angle is an acute version of the angle. In standard position the reference angle is the smallest angle between terminal side and the X. axis.

Standard position: an angle drawn on the XY plane starting on the positive X. axis and turning counterclockwise.

Quadrantal angle: an angle with its terminal side on the X. axis or the Y. axis.

Phase shift: a horizontal shift for a periodic function.

Unit circle: a circle with radius one which is centered at the origin of the XY plane.

Trigonometry: a study of triangles, with emphasis on calculation involving the links of size and the measures of angles.

Law of signs: equations relating the sines of the interior angles of a triangle and the corresponding opposite sides.

Law cosines: an equation relating to cosines of an interior angle and the lengths of this sides of a triangle.

Absolute value (modulus) of a complex number: when a complex number  $x+yi$  is written in trigonometric or polar form  $r(\cos \theta + i \sin \theta)$  R. is called the absolute value or modulus of a complex number.

Amplitude: the amplitude of a periodic function is half the difference between the maximum and minimum values of the function.

Angle of depression: the angle of depression from point X. to point Y. where Y. is below X. is the acute angle formed by the Ray XY and the horizontal Ray with its endpoint at X.

Angle of elevation: the angle of elevation from point X. to point Y. where Y. is above X. is the acute angle formed by the Ray XY and the horizontal Ray with its endpoint at X.

Angular speed: angular speed often called Omega measures the speed of rotation and is defined by the angle of rotation in radians divided by time.

### **Pelham Trigonometry Vocabulary**

Center of a circle: the center of a circle is the point that is a given distance from all points on the circle.

Closed interval: a closed interval is an interval that indicates both of its endpoints.

Complementary angles: two positive angles whose sum measures  $90^\circ$ .

Negative angle: an angle that is formed by clockwise rotation around its endpoint.

Positive angle: an angle that is formed by counterclockwise rotation around its endpoint.

Supplementary angles to positive angles whose sum measures  $180^\circ$ .

Unit vector: a vector that has a measure of one unit.

Vector: a directed line segment that represents a specified quantity.

Vector quantities: quantities that involve both magnitude and direction