PRECALC JOURNAL INTRO TO TRIGONOMETRY

- 1. The relationship between degrees, minutes, & seconds is $1^{\circ} = \underline{}'$ and $1' = \underline{}'$.
- 2. (a) Draw a picture showing how an angle of 1 radian is formed in a circle.

(b) An angle of 1 radian is approximately <u>degrees</u>.

- 3. Two angles of different sizes which stop at the exact same position are called ______
- 4. Given the equation $\sin \theta = \frac{3}{7}$, you must enter _____ in your calculator to find the reference angle.
- 5. Angular velocity is the speed at which the ______ is moving while linear velocity is the speed at which ______ is moving.
- 6. Why are angle measurements in radians often preferred over angle measurements in degrees?
- Angles expressed in radians are special angles if they have denominators of _____, ____, _____, _____
 ______, or _____.

8. (a) The result of solving an expression such as sec $x = \frac{\sqrt{7}}{3}$ is an (angle/value). *(circle one)*?

- (b) The result of evaluating a trig expression such as cot 145° is an (angle/value). (circle one)?
- 9. List the following formulas and operations. Do NOT write in full sentences.a) Convert degrees to radiansb) Convert radians to degrees
 - c) (i) Definitions of sinθ, cosθ, and tanθ in terms of opposite, adjacent, & hypotenuse.
 (ii) *Two sayings for remembering these.*

d) Three complementary function relationships

e) Label the navigation coordinate system in degrees.

- f) Formulas for arc length, area of a sector, angular velocity, and linear velocity. Give an example of the type of units each should be labeled with.
 - FormulaUnitsArc LengthArea of a SectorAngular Velocity

Linear Velocity

g) Definitions of the six trig functions in terms of *x*, *y*, and *r* and the saying to remember them.

h) Quadrants where trig functions are positive



i) Table of possible trig function values

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j) Special angle table with degrees and radians

Degrees	Radians	$\sin \theta$	$\cos \theta$	$\tan heta$