

4.5/4.6 – graph trig functions with transformations and identify key features	4.7 – evaluate inverse trig functions	4.8 – use trig and inverse trig functions to solve application questions
5.1 – determine trig values from other trig values	5.1/5.2 – verify trig identities	5.3 – solve trig equations
5.4/5.5 – use trig identities/formulas to simplify expressions $\cos x \cdot \sec x = 1$ $\frac{\cos x}{1} \cdot \frac{1}{\cos x} = 1$ $1 = 1$ ✓ $(1 + \cos x)(1 - \cos x) = \sin^2 x$ $1 - \cos x + \cos x - \cos^2 x = \sin^2 x$ $1 - \cos^2 x = \sin^2 x$ $\sin^2 x + \cos^2 x = 1$ $\sin^2 x = 1 - \cos^2 x$ $\sin^2 x = \sin^2 x$ by Pythagorean Identity	6.1 – use Law of Sines to solve triangles	6.2a – use Law of Cosines to solve triangles
6.2b – Use Heron's formula	6.3a – combine vectors algebraically/graphically $\vec{v} = \langle 3, 2 \rangle$ $\vec{u} = \langle -8, 4 \rangle$ $\vec{v} + \frac{1}{2}\vec{u}$ $\vec{v} + \frac{1}{2}\vec{u} = \langle 3, 2 \rangle + \frac{1}{2}\langle -8, 4 \rangle$ $= \langle 3, 2 \rangle + \langle -4, 2 \rangle$ $= \langle -1, 4 \rangle$	6.3b – break vectors into component form and find magnitude and direction $\ \vec{v}\ = 50$ $\theta = 20^\circ$ $\vec{v} = \langle 47, 17.1 \rangle$ $\cos(20) = \frac{v_x}{50}$ $v_x = 50 \cos(20) = 47$ $v_y = 50 \sin(20) = 17.1$ $\ \vec{v}\ = \sqrt{47^2 + 17.1^2}$ $\ \vec{v}\ = 50$ $\theta = \tan^{-1}\left(\frac{17.1}{47}\right) = 20^\circ$
9.1 – graph circles in standard form $(x-h)^2 + (y-k)^2 = r^2$ center: (h, k) radius = r Ex: Graph $(x-2)^2 + (y+3)^2 = 16$ Center: $(2, -3)$ Radius = $\sqrt{16} = 4$	9.2 – graph ellipses in standard form $\frac{(x-h)^2}{a^2} + \frac{(y-k)^2}{b^2} = 1$ center: (h, k) $\frac{(x+1)^2}{9} + \frac{y^2}{36} = 1$ Center: $(-1, 0)$	9.5 – graph in polar form and convert between Cartesian (rectangular) coordinates (radius, angle) $A \rightarrow (x, y) = (1.41, 1.41)$ $\cos(\pi/4) = \frac{x}{2}$ $2 \cos(\pi/4) = 1.41$ $2 \sin(\pi/4) = 1.41$

7.3a – solve systems by back substitution	7.3b – get systems/matrices in Row-Echelon Form	7.4 – solve matrices by using RREF with a calculator
7.5 – conduct matrix operations	7.6 – find and verify inverse matrices	7.7 – find determinant of 2x2 matrices and interpret meaning
11.1a – limit definition and evaluate limits that exist	11.1b – determine limits that DNE	11.2a – evaluate limits that need to be algebraically manipulated first
11.2b – evaluate limits using technology and one-sided limits	11.3a – find slope of tangent line at a point	11.3b – find derivative by the limit process
11.3c – derivative applications and meaning	Use this space for anything else you feel you need on your sheet.	