Pre-Calculus
Unit 3 – October 2 to October 18

Date	Topic	Assignment
Mon 10/3	Application problems	Handout
Tues 10/4	Application problems	Handout
Wed 10/5	Application problems	Handout
Thurs 10/6	Weather Project	Completing in class as necessary/Application Problems
Fri 10/7	**Test - Application Problems**	
Mon 10/10	Graph Tangent	Worksheet
Tues 10/11	Graph Cotangent	Worksheet
Wed 10/12	Graph Secant	Worksheet
Thurs 10/13	Graph Cosecant	Worksheet
Fri 10/14	Review Graphing	
Mon 10/17	Review Graphing	
Tues 10/18	**Test - Graphing Trig Functions**	

Monday, October 10 Graphing Tangent Functions

Find the amplitude, period, phase shift, vertical translation and graph the function.

1) $y = \frac{1}{4}\tan x$ 2) $y = -3\tan 4x$ 3) $y = \tan\frac{1}{2}x$ 4) $y = \tan\left(x - \frac{\pi}{4}\right)$

5) $y = 2\tan\frac{1}{4}x$ 6) $y = -\frac{1}{2}\tan x$ 7) $y = \frac{1}{2}\tan\left(\frac{1}{4}x + \frac{\pi}{4}\right)$ 8) $y = 1 + \tan 2x$

Tuesday, October 11 Graphing Cotangent Functions

Find the amplitude, period, phase shift, vertical translation and graph the function.

1) $y = \cot\frac{1}{2}x$ 2) $y = 3\cot x$ 3) $y = \frac{1}{2}\cot\frac{1}{2}x$ 4) $y = 2\cot\left(x - \frac{\pi}{2}\right)$

5) $y = \frac{1}{4}\cot(x + \pi)$ 6) $y = \cot 2x$ 7) $y = -\cot x$ 8) $y = 1 + \cot x$

Wednesday, October 12 **Graphing Cotangent Functions**

Find the amplitude, period, phase shift, vertical translation and graph the function.

1) $y = \sec\frac{x}{2}$ 2) $y = -\frac{1}{2}\sec x$ 3) $y = -\sec \pi x$ 4) $y = \sec x - 3$

5) $y = -2\sec 4x + 2$ 6) $y = \sec(x + \pi)$ 7) $y = \frac{1}{2}\sec(2x - \pi)$ 8) $y = \sec\left(\frac{\pi x}{2} + \frac{\pi}{2}\right) + 3$

Thursday, October 13 **Graphing Cotangent Functions**

Find the amplitude, period, phase shift, vertical translation and graph the function.

1) $y = \csc 2x$ 2) $y = 3\csc\frac{1}{2}x$ 3) $y = -\csc 3x$ 4) $y = 2\csc(x - \pi)$

5) $y = 2\csc 3x$ 6) $y = -\csc 2x$ 7) $y = 3\csc\frac{1}{2}x$ 8) $y = 3 + 2\csc x$

<u>Tuesday, September 20</u> Graphing Sine Functions

Without graphing, state the domain, range, amplitude, vertical shift, and phase shift for each function.

1) $y = 3\sin(\theta - \pi) + 4$ 2) $y = -2\sin\left(\theta + \frac{\pi}{2}\right) - 6$ 3) $y = \frac{1}{2}\sin\theta - 4$

4) $y = \sin\left(\theta - \frac{\pi}{3}\right)$ 5) $y = -5\sin(\theta - \pi) - 8$ 6) $y = -3\sin\theta - 5$

Graph each of the following. Identify the amplitude, phase shift, vertical shift, and range.

7) $y = \sin\left(\frac{1}{2}\theta\right) + 3$ 8) $y = -\sin(3\theta)$ 9) $y = -2\sin\theta$

10) $y = -3\sin\left(\frac{1}{2}\theta\right) + 1$ 11) $y = \sin 2(\theta - \pi)$ 12) $y = 2\sin\left(\theta - \frac{\pi}{2}\right) - 1$

Thursday, September 22 Graphing Cosine Functions

Find the domain, range, amplitude, vertical shift, and phase shift for each function.

1) $y = 5\cos(\theta - \pi) + 4$ 2) $y = \cos(\theta + 2\pi) - 3$

3) $y = -8\cos\theta - 4$ 4) $y = \frac{1}{2}\cos(\theta - 4\pi) + 3$

Graph each of the following. Identify the amplitude, phase shift, vertical shift, and range.

5) $y = \cos\left(\theta + \frac{\pi}{3}\right) + 1$ 6) $y = 2\cos(\theta + \pi) + 2$ 7) $y = -3\cos\left(\theta + \frac{\pi}{2}\right)$

8) $y = -\frac{1}{2}\cos\left(\theta + \frac{\pi}{6}\right) - 3$ 9) $y = \cos\left(\theta + \frac{\pi}{2}\right) - 1$ 10) $y = -2\cos\left(\theta + \frac{3\pi}{2}\right) + \frac{1}{2}$