Name _____Class Period _____

Pre-Calculus Unit 2 Calendar – Analytic Trigonometry

Assignments will be checked daily and stamped based on completion.

Monday	Tuesday	Wednesday	Thursday	Friday
			2/20 2.0 Simplifying Trig Expressions HW: 2.0 CW	2/21 2.1 Verifying Trig. Identities HW: 2.1 WS
2/24 2.2 Sum/Difference Formulas HW: 2.2 WS	**ACT** 2/25 Practice Day – Verifying Trig Identities	2/26 2.3 Double Angle Formulas HW: 2.3 WS	2/27 **Quiz: Trig. Identities** 2.4 Inverse Trig. Functions HW: 2.4 WS	2/28 2.5 Solving Trig. Equations HW: 2.5 WS
3/2 Practice Day – Solving and Inverse Trig HW: 2.6 WS	3/3 2.6 Unit 2 Review Day HW: 2.6 WS	3/4 **Analytical Trig. Test** HW – Video on Law of Sines		

Trig. Identities

Reciprocal Identities

$$\sin\theta = \frac{1}{\csc\theta} \qquad \cos\theta = \frac{1}{\sec\theta} \qquad \tan\theta = \frac{1}{\cot\theta}$$

$$\csc\theta = \frac{1}{\sin\theta} \qquad \sec\theta = \frac{1}{\cos\theta} \qquad \cot\theta = \frac{1}{\tan\theta}$$

Ratio Identities

$$\tan\theta = \frac{\sin\theta}{\cos\theta}$$

$$\cot\theta = \frac{\cos\theta}{\sin\theta}$$

Pythagorean Identities

$$\sin^2\theta + \cos^2\theta = 1$$

$$\tan^2\theta + 1 = \sec^2\theta$$

$$\cot^2\theta + 1 = \csc^2\theta$$

Sum/Difference Identities

$$\sin(\alpha \pm \beta) = \sin\alpha\cos\beta \pm \cos\alpha\sin\beta$$

$$\cos(\alpha \pm \beta) = \cos\alpha\cos\beta \mp \sin\alpha\sin\beta$$

$$\tan(\alpha \pm \beta) = \frac{\tan\alpha \pm \tan\beta}{1 \mp \tan\alpha\tan\beta}$$

Even/Odd Identities

$$\sin(-\theta) = -\sin\theta$$

$$\cos(-\theta) = \cos\theta$$

$$\tan(-\theta) = -\tan\theta$$

$$\csc(-\theta) = -\csc\theta$$

$$\sec(-\theta) = \sec\theta$$

$$\cot(-\theta) = -\cot\theta$$

Periodic Identities

$$\sin(\theta + 2\pi) = \sin\theta$$

$$\cos(\theta + 2\pi) = \cos\theta$$

$$\tan(\theta + \pi) = \tan\theta$$

$$\csc(\theta + 2\pi) = \csc\theta$$

$$\sec(\theta + 2\pi) = \sec\theta$$

$$\cot(\theta + \pi) = \cot\theta$$

Double Angle Identities

$$\sin(2\theta) = 2\sin\theta\cos\theta \qquad \cos(2\theta) = \cos^2\theta - \sin^2\theta$$

$$\tan(2\theta) = \frac{2\tan\theta}{1 - \tan^2\theta} \qquad = 2\cos^2\theta - 1$$

$$= 1 - 2\sin^2\theta$$

Law of Sines

$$\frac{\sin\alpha}{\alpha} = \frac{\sin\beta}{\beta} = \frac{\sin\gamma}{\gamma}$$

Law of Cosines

$$a^2 = b^2 + c^2 - 2bc\cos\alpha$$

$$b^2 = a^2 + c^2 - 2ac\cos\beta$$

$$c^2 = a^2 + b^2 - 2ab\cos\gamma$$