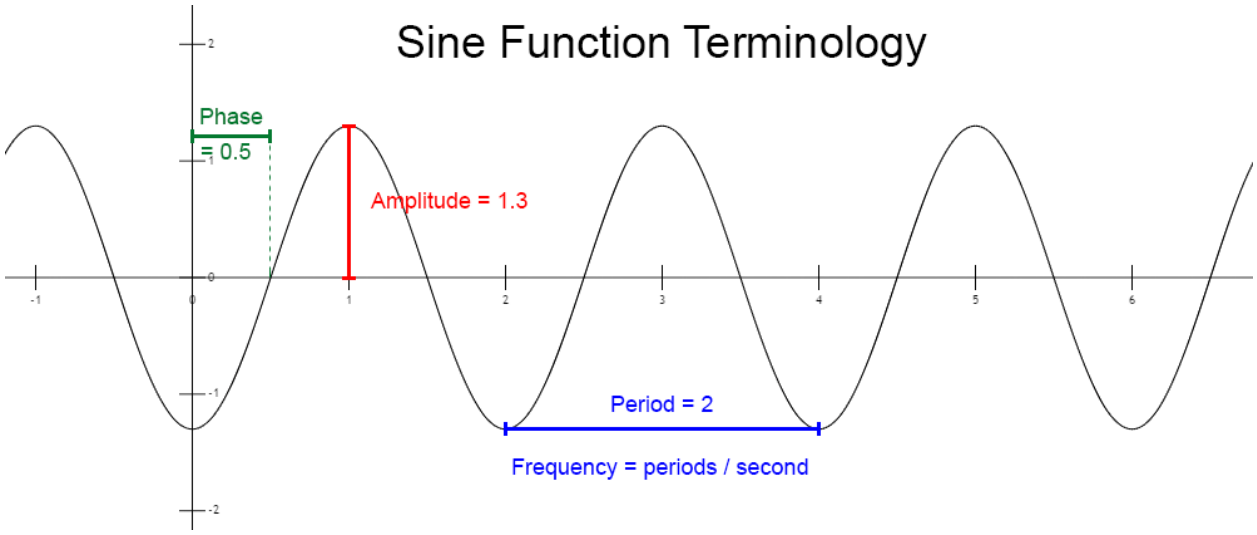
Name: _____

Pre-Calculus

(1/22-2/15)



"Arithmetic! Algebra! Geometry! Grandiose trinity! Luminous triangle! Whoever has not known you is without sense!"

-- Comte de Lautreamont

Overview:

Welcome to Quarter Three! For our next unit, we will take a closer look at the relationship between circles and trigonometric functions. In addition, we will analyze trig functions so that we can graph them based on their amplitudes as we go around the unit circle. Although I will be providing numerous optional resources, I highly recommend taking advantage of them. Trigonometry can be incredibly difficult, and static images on a whiteboard will not be enough to get comfortable with this topic!

Reminders:

- **No late work will be accepted from this point forward.**
- **Individual Work: Show all your steps on how you get to your answer! I will take points off for no work.**
- **IXL: If you choose to achieve proficiency on 3 skills, you must work on your skills for at least 30min.**

Lessons:

Content Lesson Themes

____ 4.4: Trigonometric Functions of Any Angle

____ 4.5: Graph Sine/Cosine Functions

____ 4.6: Graph Other Trigonometric Functions

____ 4.7a: Evaluate Inverse Trig Functions

____ 4.7b: Compositions of Trig Functions

Assignments	Due Date (BoC)
1/22-1/25: **Guiding Question: How do trigonometric functions generalize to angles larger than $180° / \pi\ rad$?** **____ 1)** Vocabulary: **trigonometry, radian, complementary angle, supplementary angle, sine curve, amplitude, period, phase shift, inverse trigonometric function, composition**(do one of the below). a. Graphic Organizer b. Mind Map c. Vocabulary Cards	**Thurs, 1/24**
____ Lesson: 4.4: Trigonometric Functions of Any Angle **____*2) Problem Set:*** p.295 #'s 1, 3, 5, 17, 19, 37, 41, 53, 95	**Mon, 1/29**
____ *3) IXL:* Achieve proficiency in 3 skills (smart-score of 80) **OR** spend 1-hour total for the week. You may work either in: a. Recommended Tab (AT LEAST 9th grade level!) b. Pre-Calculus: M.4, M.6-9	**Mon, 1/29**
1/28-1/31: This is an early dismissal week. Classes will be held for 1 hour on Mon/Wed. **Guiding Question: What do our trigonometric functions look like when graphed with the input being its angle?** **____ Khan Academy Lesson:** These videos will cover concepts from 4.5. Take notes for future reference. a. Graph of y=sin(x) b. Graphing Sine and Cosine Trig Functions with Transformations **____ *4)* Problem Set** – 4.5: p.305 #'s 3-9 odds, 15-23 odds, 27, 29, 31, 83, 85 ____ **Khan Academy Lesson:** These videos will cover concepts from 4.6. Take notes for future reference. a. The Graphs of Tan and Cotan b. How to Graph Secant and Cosecant with Transformations **____ *5)* Problem Set –** 4.6: p.316 #'s 5-23 odds	**Wed, 1/30** **Mon, 2/4**

____ ***6) IXL:*** Achieve proficiency in 3 skills (smart-score of 80) **OR** spend 1-hour total for the week. You may work either in: a. Recommended Tab (AT LEAST 9th grade level!) b. Pre-Calculus: N.4-N.9 Solving for Squared Variables, Complex Numbers, Radicals	**Mon, 2/4**
2/4-2/8: **Guiding Question: If we are given the ratio of a triangle's sides, how do we find the angles of it?** ____ **7) QUIZ:** 4.4: Trig functions of any angle, 4.5/4.6: Graphs of Trig Functions ____ **Lesson:** 4.7a: Evaluate Inverse Trigonometric Functions ____ **8) Problem Set –** 4.7a: p.327 #'s 1-23 odds ____ **Lesson:** 4.7b: Compositions of Trigonometric Functions ____ **9) Problem Set-** 4.7b: p.328 #'s 29-45 odds, 63	**Monday (Beginning of Class)** **Thurs, 2/5** **Mon, 2/11**
2/11-2/15: **Guiding Question: What are some applications of trigonometry?** ____ **10) Group Activity:** With a partner, create a poster or slideshow presentation which answers one of the following questions: p.337: 15, 21, 23, 24, 62, 63, 64, 65 ____ **8) QUIZ:** Evaluate Inverse Trigonometric Functions and Compositions	**Thurs, 2/14** **Thurs, 2/14 (Beginning of Class)**