A message from the district:
We worked hard to ensure that the Learning Plan provides accessibility for all learners. We hope that you see that there are options to engage learners at all levels. *These activities are not intended to replace the normal school day.* **There is now an expectation at this time to turn these documents in to your specific educators.** We want you to take time to enjoy family, be safe, stay healthy and find time within this week to engage in learning opportunities. Feel free to create a schedule that works for you and your family. We strongly encourage each student to participate in approximately two hours a day. We want your brain working and challenging yourself, while staying safe and having fun. (Have AP review plans)

THIS WEEK'S ACTIVITY:

Pre-Calc
Week 4 Activity: Trig Functions
Time: 2 Hours

***Same guidelines as last week; this work must be submitted on your Google Classroom form by the end of the day on Friday 4/17, you may work with friends, you may email me at any time for help

***Still ungraded but do your best

Answer the following as best you can. Type your answers on your google form if possible. If a problem requires work on paper attach a picture of your submission.

1. Using the solutions for week 3 that I posted on GC this morning, correct your work ("corrections") as we have done on tests this year. Your response here will be a reflection (write about what mistakes you found and corrected) on your work. You may also comment (brag?) a little about what you thought was easy. NOT need pictures of your corrections.
   *** Work together using Facetime or SnapFace or whatever. Ha!
   *****If you don't have many to correct you must contact someone else in class and help them fix a mistake**. You can then reflect on how you helped them. (30 Min)

Trig Functions

***You will be going to the Khan Academy website on question #12. But you are free to go there anytime for help with these questions. Use the search tool and type in the trig topic you forgot.

2. If I give you a point in a plane (x, y) that lies on the terminal side of an angle in standard position, explain how you would find the exact values of the six trig functions (sin, cos, tan, csc, sec, cot) for that angle. Describe your process in step by step form. (10 Min)

3. Create an actual example point for #2 above (NOT in Quadrant 1) and find the actual six values for the point you chose. (10 Min)

4. If $\sin\theta < 0$ and $\cos\theta < 0$ in what quadrant must θ lie? Explain. (5 Min)

For each of the following trig functions and their graphs, state the following: a) the amplitude, b) the period, c) any horizontal translation, d) any vertical translation:

5. $y=2\sin(x-\pi/2)+1$

6. $y= -\cos 2(x+\pi/2)$

7. $y= \tan(1/2)\, x -1$ (10 Min)

8. Sketch graphs of #5, 6 and 7 (15 Min)

<u>Inverse Trig Functions</u>

9. Picture the graph of y=sin x. Restrict it to $(-\pi/2, \pi/2)$. Use this picture to state the Domain and Range of $y= \sin^{-1}x$.

10. Repeat exercise #9 for y=tanx. State the D and R of $y=\tan^{-1}x$.

11. Repeat for y=cosx except restrict it to $(0, \pi)$. Then state the D and R for $y=\cos^{-1}x$. (15 Min)

12. Use the link below to watch the video on ArcSin (recall, this is just another name for Inverse Sin). Write a brief reflection on the video. What did you remember? Any details you had forgotten? (15 Min)

https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:trig/x9e81a4f98389efdf:inverse-trig/v/inverse-trig-functions-arcsin

13. Evaluate the following (radians, please!)

a) $\sin^{-1}(-½)$

b) $\tan^{-1}\left(-\sqrt{3}/3\right)$

c) $\cos^{-1}\left(-\sqrt{2}/2\right)$ (10 Min)

14. For θ on the interval $(0, 2\pi)$ explain the difference between solving $\sin\theta = -½$ and solving $\theta = \sin^{-1}(-½)$. (? Min)