Summer Assignment 2019-2020
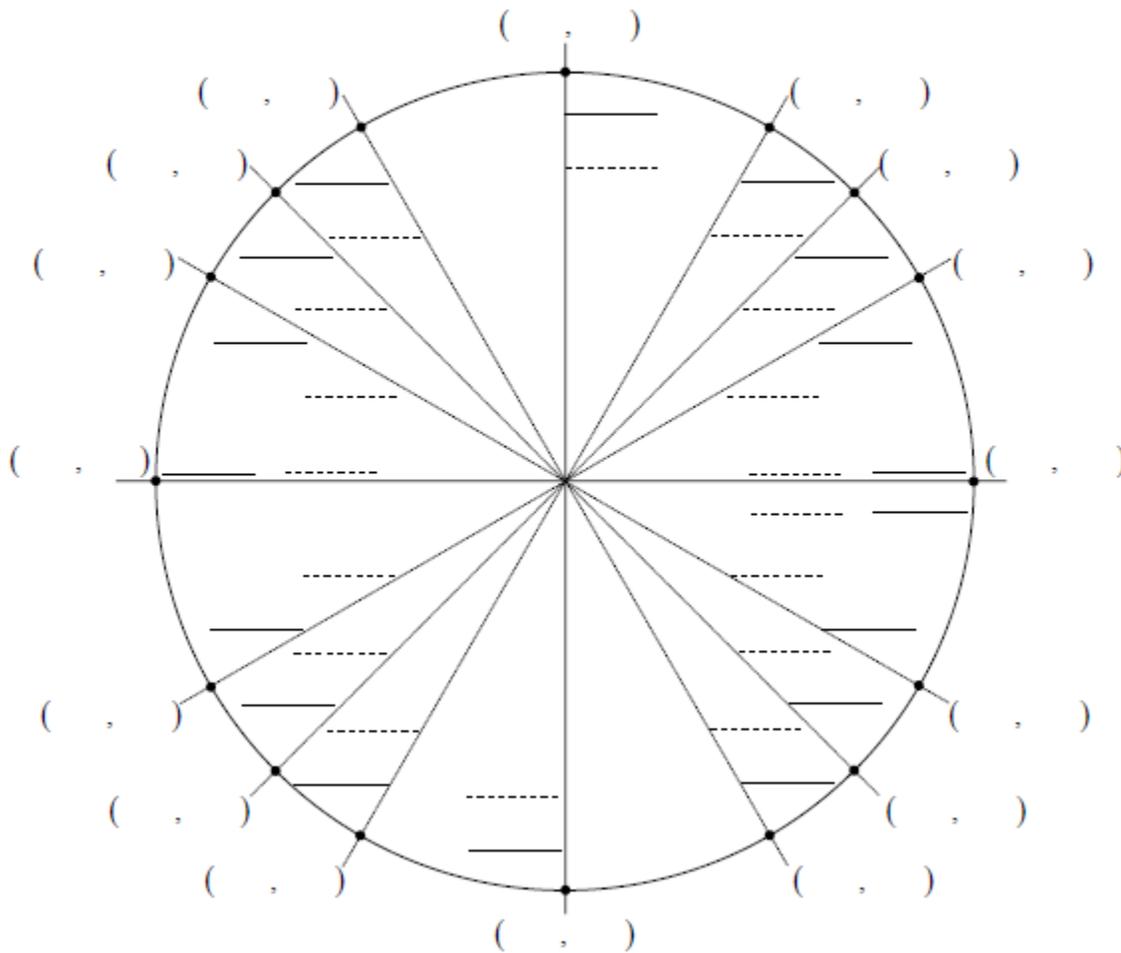
Note: All problems should be done without a calculator unless otherwise stated and work should be shown.

Place the **degree** angle measure of each angle in the **dashed** blanks inside the circle, and the **radian** measure of each angle in the **solid** blanks inside the circle. Place the coordinates of each point in the ordered pairs outside the circle.

Evaluate each of the following.

1) $\sin(\frac{\pi}{6})$

2) $\csc(\frac{3\pi}{4})$

3) $\tan(\frac{13\pi}{6})$

4) $\cos(\frac{9\pi}{6})$

5) $\cot(\frac{6\pi}{2})$

6) $\sec(\frac{11\pi}{6})$

7) In an isosceles right triangle, the length of the hypotenuse is 4 feet. Find the length of each leg of the triangle.

8) In right triangle ABC, B is a right angle and C has a measure of 30°. If AB = 2, find the lengths of AC and BC.

AC = _____   BC = _____

Evaluate/simplify each of the following.

9) $3^{\frac{3}{2}}3^{\frac{5}{2}}$

10) $4^4 4^{\frac{1}{6}}$

11) $\dfrac{5^{-3}}{125^{-2}}$

Rewrite each of the following as an exponential equation.

12) $3\log_4(7-x) = 2x$

13) $\log_2(x-1) + \log_2(x+1) = 3$

Solve each of the following for x

14) $\log_2(x - 1) + \log_2(x + 1) = 3$

15) $\log_7(x - 6) = 2$

16) $2\log_2(x - 4) = 6$

17) How do you find the area of a circle?

18) How do you find the area of a triangle?

19) Evaluate 22+8/2

20) Factor $x^2 - 25$

21) Factor $x^2 - 7x - 18$

22) Solve $2x^2 - 7x = 11$ (Leave your answer in the most simplified form)

Note: This should not be mistaken as an indicator of the difficulty level of this class. This assignment is given to ensure that you have no problems with the most basic concepts that you should understand entering AP Calculus. If you struggled with any of the material on this assignment, you will need to attend tutoring as often as possible to ensure that you have the required prerequisite knowledge to succeed in this class.