Honors Advanced Math(Precalculus) Summer Assignment – 2019/2020

Make sure to check out a textbook before you leave for summer!! You will also need a graphing calculator. If you don't have one already, try to purchase a Ti-84 or 83 series before school starts. (You may choose a different model, but I will be instructing with a Ti-84). I recommend starting this assignment a few weeks before school starts, so you can gauge how long it will take you to complete it. Do not wait until the last week!!! I expect you to attempt every problem and show your work, but we will go over questions from these assignments on the first 2 days of class. Also, if you are really struggling you may want to contact me the week before school starts and possibly come in for help. We will move rapidly through the first few chapters as we review algebra 2, so if you continue struggling early you might consider moving to regular precalculus.

This assignment is due the **first** day of school. You can follow the examples in the sections, but you should already be familiar with all of this material. You will be reviewing the appendix chapter in the back of the book and the beginning of chapter 1. We will have a quest on the appendix chapter at the end of the first week of school.

See the appendixes at the end of the book

A.1 page A11 #15-130 (x5) which means multiplies of 5 i.e. 5,10,15,20,……

A.2 page A24 #15-130 (x5)

A.3 page A35 #10-220 (x10) and 221-226all

A.4 page A46 #10-100 (x5)

A.5 page A60 #5-155 (x5), 157, 167, 175

A.6 page A69 #10-105(x5), 112,116

And Worksheet Review for 1.1-1.6 (see next page)

Advanced Math Review for 1.1-1.6 Name_____

block_____

1. Determine the quadrant(s) where (x,y) is located:

   a). $-x>0$ and $y<0$ b). $xy>0$

2. Give the intercepts and symmetry:

   a). $y=-x^2-2x$ b). $x=y^2-5$

3. Write the standard form of the equation of the circle with center $(3,-2)$ and solution point (-1,1)

4. Find the slope-intercept form of the equation of the line passing through $(4,3)$ and $(-4,-4)$

5. Write the slope-intercept forms of the equations of the lines through the given point a). parallel to the given line and b). perpendicular to the given line: $x+y=7,\ (-3,2)$

6. Find a relationship between x and y such that (x,y) is equidistant from the 2 points $(6,5)$ and $(1,-8)$

7. Given $f(x)=\begin{cases}3x-1, & x<-1\\ 4, & -1\le x\le 1\\ x^2, & x>1\end{cases}$, find a). $f(-2)$ b). $f\left(-\frac{1}{2}\right)$ c). $f(3)$

8. Find the values of x for which $f(x)=g(x)$ given $f(x)=x^2+2x+1$ and $g(x)=7x-5$

9. Find the domain: a). $g(x)=\frac{1}{x}-\frac{3}{x+2}$ b). $f(x)=\frac{\sqrt{x-1}}{x-4}$

10. Given $f(x)=x^3+3x$, find $\frac{f(x+h)-f(x)}{h}$

11. Find the zeros of the function algebraically:

    a). $f(x)=\frac{x}{9x^2-4}$ b). $f(x)=9x^4-25x^2$

12. Approximate any relative minimum or relative maximum values: $f(x)=x^3-3x^2-x+1$ from the calc.

13. Determine if the function is even, odd or neither algebraically: $f(x)=x^2-4$

14. Graph $f(x)=\begin{cases}2x+3, & x<0\\ 3-x, & x\ge 0\end{cases}$

15. Graph $h(x)=\begin{cases}4-x^2, & x<-2\\ 3+x, & -2\le x<0\\ x^2+1, & x\ge 0\end{cases}$