Name_____
Due Date_____
Block_____

Algebra 2/Trig Review #5

Complete on a separate piece of paper.

List 3 sets to which each number belongs:

1. -8	2. π	3. $\sqrt{8}$	4. $\frac{3}{3}$
5. 10% of 80	6. 4^{-2}	7. One-half of 12	8. 13

Name the field axiom being described:

9. The order in which you multiply two numbers does not change the answer.
10. An integer plus another integer is another integer.
11. $\forall a \in \mathbb{R}, a+(-a)=0$
12. $(x+7)(x+3)=(x+7)\bullet x+(x+7)\bullet 3$
13. $(2+3)+5=2+(3+5)$

Explain:

14. Why is something raised to the 0 power equal to one?

Simplify:

15. $4+2\left[5-3^2\cdot 2(4-2)^4\right]$
16. $4\bullet 3\div 6\bullet 2\div 2\bullet 6$

Find the first 12 terms of each sequence:

17. $a_n=a_{n-1}-3$, for $n\geq 2$, $a_1=4$
18. $a_n=a_{n-2}+2a_{n-1}$, for $n\geq 3$, $a_1=1, a_2=1$

Find the 200^{th} term of each sequence:

19. $-1,-3,-5,\ldots$
20. $1,-1,1,-1,\ldots$

Write a recursive formula to describe the sequence:

21. $-1,3,2,5,7,12,19,\ldots$

Graph using the slope and y-intercept:

22. $3x+5y=10$

23. Determine the equation of the line that goes through $(3,-2)$ and is perpendicular to the line whose equation is: $-3x-5y=8$

Write in standard form:

24. $y-3=\frac{2}{3}(x-9)$

25. Solve the following system using substitution. Then solve the system using elimination. Finally, verify your solution by graphing:

$5x-3y=-3$

$-4x+2y=2$

26. Graph the following system:

$y\le -2x+4$

$x>5$

$y-3\le 4(x-2)$

$4x-2y<6$

27. Let $y=2x^2-16x+30$

Simplify:

28. $\left(\frac{3x^2y^3z}{9xy^4z^2}\right)^{-2}$