Pre AP Precalculus Name_____

Period_____Assignment# 1

Pre AP Precalculus Review

This review is intended for students entering Pre AP Precalculus. It must be completed and turned in to your teacher on the first day of school.

You are required to use the following guidelines.

1. All work is to be done neatly and legibly. No credit is given for anything that is unreadable.
2. All problems are to be done on notebook paper.
3. All graphs are to be done on graph paper using a straight edge.
4. All work should be done in pencil.
5. Your writing should sit on the blue lines of the notebook paper. **Do not** try to squeeze two lines of work in one space.
6. If you make a mistake, erase it.
7. Do not write in the margins of the paper.
8. You are allowed to write on the back of both the notebook paper and the graph paper.
9. Do not put more than two problems across the page.
10. Skip one line between problems.
11. You are allowed to put a maximum of four graphs on each side of the graph paper. Fold your graph paper in half lengthwise and widthwise. Unfold it and the creases will mark the areas that will divide your graph paper evenly.
12. Make sure your name is on each page.
13. When you finish, staple it together in this order:
    a. this cover page and worksheet
    b. your notebook paper
    c. your graph paper

Pre A.P. Precalculus
Review

Solve.

1. $\frac{1}{8}-\frac{3}{4}x=\frac{1}{16}$

2. $\frac{3}{4}-\frac{3}{5}x=\frac{2}{5}x+\frac{1}{2}$

3. $3|3x+2|=51$

4. $4|2y-7|+10=9$

5. $\frac{x+8}{4}-1>\frac{x}{3}$

6. $|2x-9|\leq 27$

7. $5y^2=80$

8. $v^3-49v=0$

9. $4a^2-17a+4=0$

10. $3c^2+7c-2=0$

11. $x+2x^2+1=-1-x$

12. $\frac{12}{x}+\frac{3}{4}=\frac{3}{2}$

13. $\frac{x+1}{x-3}=4-\frac{12}{x2-2x-3}$

14. $\frac{6}{x-1}=\frac{4}{x-2}+\frac{2}{x+1}$

Solve.

15. $\begin{cases} 3x-5y=-13 \\ 4x+2y=0 \end{cases}$

16. $\begin{cases} u+11=8v \\ 8(u-v)=3 \end{cases}$

17. $9^{2x}=27^{x-1}$

18. $2^{x}\cdot 4^{x+5}=4^{2x-1}$

Graph. (on graph paper)

19. $3x-2y=5$

20. $y=(x-3)^2-4$

21. $f(x)=-2x^2+5x-10$

22. $f(x)=\dfrac{x-5}{x+1}$

23. $g(x)=\dfrac{2x+1}{x-3}$

Factor completely.

24. $6a^2+27a-15$

25. y^4-16

26. $4x^6-4x^2$

27. $18p^3-51p^2-135p$

28. $4x^3 - 32y^3$

Simplify.

29. $\dfrac{-4ab}{21c} \cdot \dfrac{14c^2}{22a^2}$

30. $\dfrac{x^2+3x-10}{x^2+8x+15} \cdot \dfrac{x^2+5x+6}{x^2+4x+4}$

31. $\dfrac{\dfrac{2x^2+9x+9}{x+1}}{\dfrac{10x^2+19x+6}{5x^2+7x+2}}$

32. $\dfrac{m+3}{m^2-6m+9} - \dfrac{8m-24}{9-m^2}$

Find the domain, range, zeros and graph.

33. $p(x) = x^3 - x$

34. $f(x) = x^4 - 9x^2$

35. $g(x) = \sqrt{x-2}$

36. $h(x) = \dfrac{1}{x-4}$

Define in terms of x, y and r.

37. $\sin\theta$

38. $\cos\theta$

39. $\tan\theta$

Convert to radians.

40. 210°

41. 315°

42. 120°

43. 330°

44. 150°

45. 225°

Find $\sin\theta$, $\cos\theta$ and $\tan\theta$ for each.

46. $\theta = \frac{\pi}{6}$

47. $\theta = \frac{\pi}{2}$

48. $\theta = \frac{3\pi}{2}$

49. $\theta = \frac{\pi}{3}$

50. $\theta = \frac{\pi}{4}$