Summer Packet for Students entering Algebra II Honors Name_____

Please show all work and answers on this sheet, not a separate sheet of paper. DO NOT use a calculator!

$(1-8)$ Evaluate each expression.

1. $3+4\cdot5$

2. $-9-3$

3. $(-4)(-3)+6(-2)$

4. $8\div4\cdot2$

5. $-3(5+-2)-(3-7)^2+5(-2)$

6. $7-2\left[11-3^2\right]+9\div(-3)$

7. $\dfrac{12(3)-2(5)}{5^2-4(3)}$

8. $\dfrac{-6(3)+(-2)^3}{6\cdot4-2^3\cdot3}$

$(9-16)$ Simplify each expression.

9. $t^4\cdot t^7$

10. $\left(2t^2\right)^3$

11. $\dfrac{x^{14}}{x^7}$

12. $(3x-1)(5x+2)$

13. $(2x+5)^2$

14. $(3x-5)(3x+5)$

15. $(3x^2+5x+7)+(2x^2-7x-8)$

16. $(4x^2-4x-8)-(2x^2+3x-6)$

$(17-25)$ Factor each

17. $16y^2+40y+25$

18. x^2+6x+8

19. $25x^2-64$

20. $6x^2y^2-9x^2y+3xy$

21. $x^2-9x+20$

22. $x^2-8x-40$

23. $2x^2+5x-7$

24. $5m^3+6mn+10m^2n+12n^2$

25. $3x^2y-12y$

$(26-33)$ Solve each equation.

26. $5x-1=14$

27. $3-2x=-7$

28. $\frac{3}{4}x=12$

29. $\frac{2}{5}x-\frac{1}{12}=-\frac{3}{5}x-\frac{3}{4}$

30. $-2(x-1)=-3x$

31. $6(2x+1)-10x+3=17$

32. $7(x-2)-6(x+1)=-20$

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

$(34-35)$ Solve and graph each inequality.

34. $3x-5>12$

35. $-2x\le -10$

36. Solve the following equation for y.

$3x-4y=12$

37. Solve the following equation for W

$A=LWH$

$(38-39)$ Evaluate each expression for the given replacements.

38. $3m^2-4mn+5n$ for $m=-2$ and $n=3$

39. $\dfrac{2(4m+3n)}{3n^2+7}$ for $m=2$ and $n=-1$

$(40-41)$ Complete each ordered pair given the line $y=-2x+3$

40. $(-3,\ \ )$

41. $(\ \ \ ,5)$

$(42-43)$ Determine the slope of the line through each pair of points.

42. $(-2,5)$ and $(2,-3)$

43. $(-5,7)$ and $(3,7)$

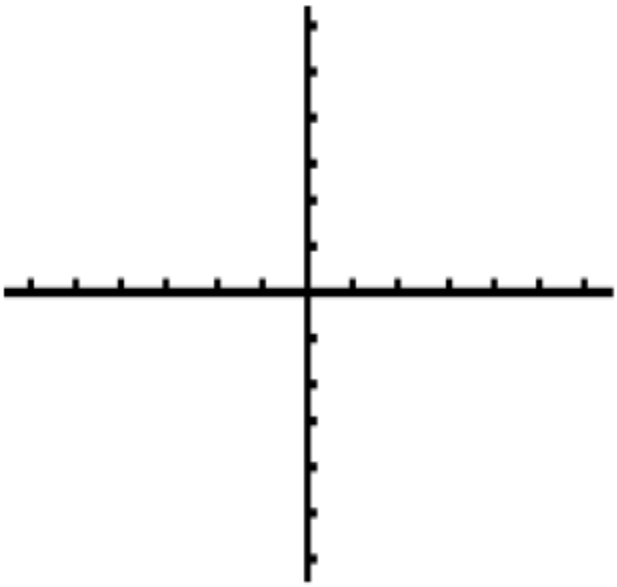
44. $(5,6)$ and $(5,7)$

45. Determine the equation of the line containing the points in problem 42. Put your answer in slope-intercept form.

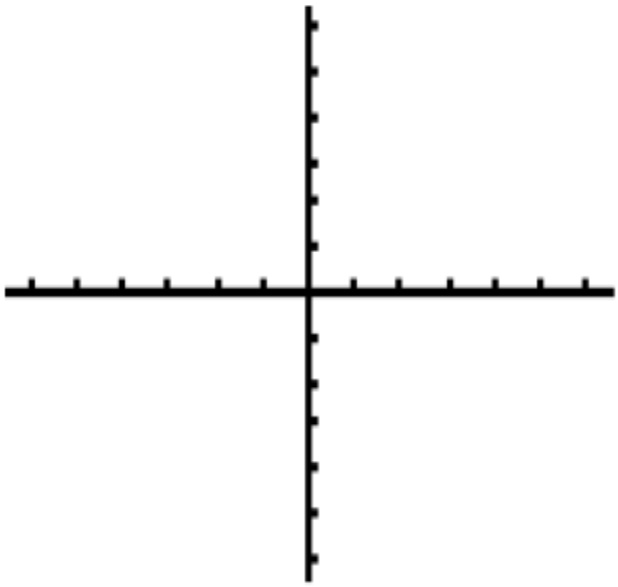
46. Determine the equation of the line containing the points in problem 43. Put your answer in slope-intercept form.

$(47-50)$ Sketch the graph of each sentence.

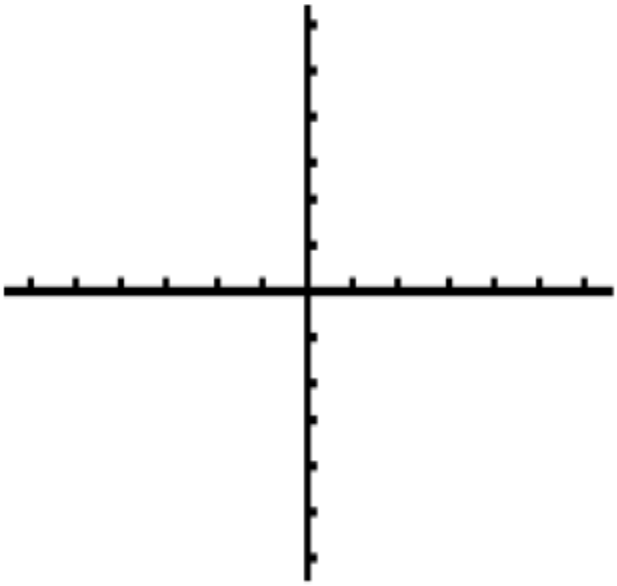
47. $y = 2x - 3$



48. $2x + 3y = 6$



49. $x = -4$



50. $y < -\frac{1}{2}x + 4$