Geometry Summer Packet

June 2019

This packet will be due the first week of school and will be your first grade. Be sure to show all of your work and box your final answer. Your work should be neat and legible. If you need more space than is provided, you can attach a separate sheet of paper with problems numbered and in order.

Have a happy and safe summer, and we look forward to seeing you in Geometry in the fall.

Archbishop Curley Math Department

Name_____

Directions for 1-5: Solve each linear equation for x. Show all work!

_____ 1. $3x + 8 = 7x - 16$

_____ 2. $2x - 25 = 7x$

_____ 3. $-4(3 - x) = 2(x + 6)$

_____ 4. $3x - 5(x + 6) = 0$

_____ 5. $6x + 7 - 2x + 4 = 2x + 6$

Directions for 6-10: Multiply. Show all work!

_____ 6. $3x(2x - 5)$

_____ 7. $(x - 9)(x + 8)$

_____ 8. $(x + 16)(x + 4)$

_____ 9. $(2x - 1)(x + 5)$

_____ 10. $(x - 7)^2$

Directions for 11-14: Combine Like Terms. Show all work!

11. $-9x + 6 + 17x$	12. $-15n + 2n + 13n$
13. $-9 - 8x + 4 + 10x$	14. $3x - 7x^2 - 4x + 3x^2$

Directions for 15-18: Distribute. Show all work!

15. $-3(2y - 6)$	16. $-2(2x + 5y)$
17. $-(-x + 2)$	18. $2(-4x + 1)$

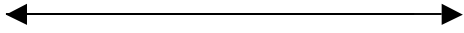**Directions for 19-24: Distribute and Combine Like-Terms. Show all work!**

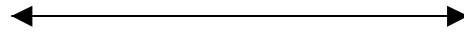|	
19. $-3x + 3(x - 5)$	20. $2 - 5(3x + 1)$
21. $-2(x - 1) + 7$	22. $-2(x - 5) + 3(4x + 3)$
23. $2x - (3x - 1)$	24. $6(x + 3y) - 2(3x - 2y)$

25. $- 3x - 5 = -14$	26. $-x + 5 = 0$

Directions for 27-28: Solve and graph the following inequalities. Show all work!

27. $2x + 5 > 1$	28. $6 - x \le -1$
$\longleftrightarrow$	$\longleftrightarrow$

Directions for 29-34: Find the Greatest Common Factor (GCF)

29. 18 and 54	30 15 and 50
31 27 and 72	32. 39 and 169
33. 24 and 144	34. 60 and 75

Directions for 35-36: Find the slope of the line through each of the given points. Show all work!

35. What is the slope of the line through (-4, 2) and (5, 8)?

36. What is the slope of the line through (3, -8) and (9, 5)?

**Directions for 37-38: Write the equation of the line through each of the given points. Show all work!**

37. What is the equation of the line through (-4, 2) and (5, 8)?

38. What is the equation of the line through (3, -8) and (9, 5)?

Directions for 39-40: Graph the lines for each of the given equations. Label all points and axes.

39. Graph the equation $2y = 3x - 8$

40. Graph the equation perpendicular to $2y = 3x - 8$ that goes through the origin.
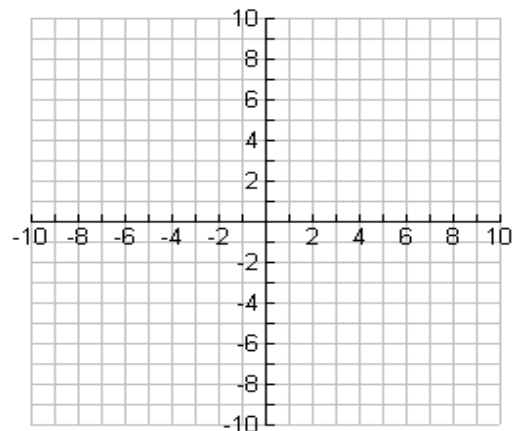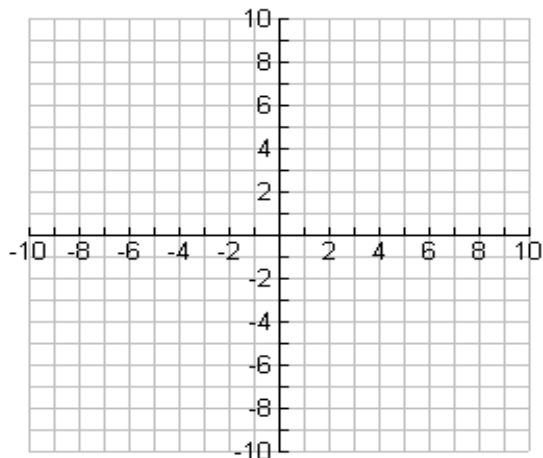
Directions for 41-45: Simplify each expression, using rules and laws of algebra.

41.   Simplify $\sqrt{196x^4y^6}$

42.   Simplify $\dfrac{16x^4-8x^2+16}{(x+4)(x+2)}$

43.   Simplify $\dfrac{3x+1}{x}-\dfrac{2}{x+1}$

44.   Simplify $\dfrac{10+\sqrt{50}}{5}$

45   Simplify $\sqrt{18}+\sqrt{8}$