# NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_DATE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_PERIOD\_\_\_\_\_\_\_\_

## ALGEBRA 1 REVIEW #4 FOR SPRING SEMESTER EXAM

Graph the inequalities below and shade the solution.



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| 1. y > ½ x - 4 |
| 2. y > -2x + 3  y  x + 1 |
| 1. Circle the following points that are in the solution set of problem #2.   **(-5,-6) (0,0) (4,-1) (0,8) (8,0)** |

Simplify the following problems.

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| 1. (-3x4)(4x3) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 5. (8x6)(2x4) – (5x2)(5x8) = \_\_\_\_\_\_\_\_ |
| 1. (x - 5)(x – 7) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 7. (4x – 3)(3x + 3) = \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 8. 4t(2t2 – t – 5) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 1. 2x2y(2x2 – 3xy + y2) = \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. (-4c3)3 = \_\_\_\_\_\_\_\_\_\_\_\_ | 11. (4x2y)2(-3xy2)3 = \_\_\_\_\_\_\_\_\_\_\_\_ |
| 6a  a  9a  12. Find thevolume of this solid. V \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

Simplify.

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| 13. 21a-5bc9 =  14abc \_\_\_\_\_\_\_\_\_\_\_\_ | 14. 4c3d =  12cd \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

FACTOR COMPLETELY.

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| 15. 18x – 12y + 36 \_\_\_\_\_\_\_\_\_\_\_\_\_ | 16. 81x4 – 16y6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 17. -4x2 - 8x + 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 18. 2r2 + 7r +5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 19. 4p2 + 7p – 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 20. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 21. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 22. \_\_\_\_\_\_\_\_\_\_\_\_\_ |

What are the solutions**.**

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| 23. (n - 5)(n + 8) = 0 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 24. (3x + 1)(2x + 5) = 0 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 25. x2 + 6x + 8 = 0 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 26. 5a2 - 14a = 8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Solve using the **Quadratic Formula.** Round your answers to the nearest tenth.

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| 27. 6x2 – 5x – 2 = 0  Answers: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 28. x2 - 10x + 24 = 0 a = \_\_\_\_\_\_ b = \_\_\_\_\_\_ c = \_\_\_\_\_\_  Answers: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 29. 2x2 = -5 – 11x a = \_\_\_\_\_\_ b = \_\_\_\_\_\_ c = \_\_\_\_\_\_  Answers: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 30. Find the missing factor: 56p7q8 = (2pq4)(4pq)\_\_?\_\_  **ANSWER**: \_\_\_\_\_\_\_\_ |

Write the equation for the parabola: **y = x2**

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| 31. Shifts down 4 units and more narrow **ANSWER:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 32. Make parent function wider and facing down **ANSWER:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 33. At which points does the graph of f(x) = 4x² + 8x – 2 intersect the x-axis? |
| 34. For the function y = 4x² + 3x – 1, what is the value of y when x = -5? |
| 35. What is the vertex of y = 4x² + 3x – 1? |
| 40. EVALUATE:  where a = -8, b = -5, and c = 6. |