**Honors Pre-Calculus Name**

**Summer Assignment Date Block**

**Algebra Review**

Unless otherwise specified, final answers are to be written with simplified and reduced fractions and/or radicals. All work is to be completed on a separate paper, properly identify it with the section and problem number. All work should be done in pencil only.

**Section I: Factoring**

Factor completely, looking for a common factor.

1. 2. 3. 4.



Factor the difference of two squares.

5. 6. 7. 8.



Factor the perfect square trinomial.

9.  10. 11. 



Factor the sum or difference of two cubes.

12. 13. 14.



Factor the trinomial into two binomial factors.

15. 16. 17.



Factor by grouping.

18. 19. 20.



Factor the polynomial expression completely.

21. 22. 23.



24. 25. 26.



27. 28. 29.



**Section II: Rational Expressions**

Reduce and simplify each expression.

30. 31. 32.



33. 34. 35.



Simplify each rational expression with only positive exponents.

36. 37.



38. 39.



40. 41.



Simplify the compound fraction.

42.  43. 

44.  45. 

**Section III: Linear , Quadratic and Radical Equations**

Solve each linear equation with an algebraic solution.

46. 47.



48. 49. 50.



Solve the quadratic equation by extracting square roots. Simplify radicals without decimals.

51. 52. 53. 



54. 55. 56. 



Solve the quadratic equation by completing the square. Simplify radicals without decimals.

57. 58. 59.



60.  61.  62. 

Solve the quadratic equation using the quadratic formula. Simplify radicals without decimals.

63. 64. 65.



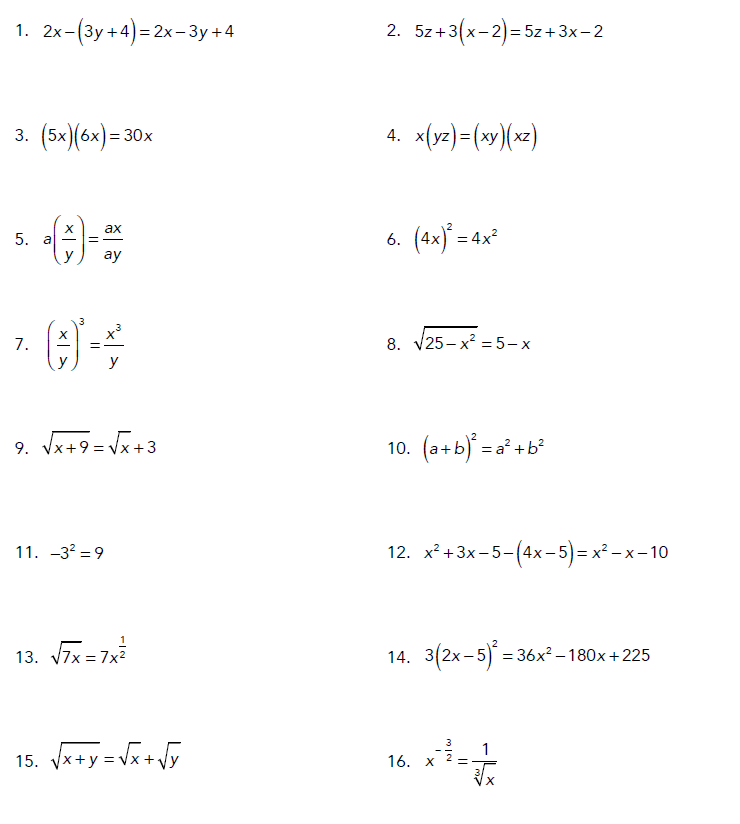
Solve the square root equation.

66.  67.  68. 

69.  70. 

**Section IV: Common Algebra Mistakes**

Each of the following contains a very common algebraic error. Correct each of the errors and explain the error that was made.

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