<u>Algebra Review</u>

Simplify (combine like terms)
1. $3x + x^2 - x^2 + 7$

2. $x^2y + 4xy + y^2 + 3x^2y$

3. $7x - 2x + 4 - 9 + 3y$

Multiply (FOIL)
4. $(x + 4)(x - 3)$

5. $(x - 5)(x + 7)$

6. $(x + 2)(x + 2)$

7. $(x + 5)(2x - 1)$

8. $(x + 6)(x - 6)$

9. $(x + 1)(x + 5)$

10. $(x - 7)(x - 3)$

Factor
11. $x^2 + 10x + 9$

12. $x^2 + 7x + 10$

13. $x^2 - 3x - 10$

14. $x^2 + 6x + 9$

15. $x^2 - 16$

16. $2x^2 + 7x + 3$

17. $2x^2 - 4x - 6$

18. $x^2 + 15x$

19. $2x^3 + 6x^2$

Solve using the Quadratic Formula
20. $x^2 + 8x + 5 = 0$

21. $x^2 - 4x - 96 = 0$

22. $x^2 - 3x - 154 = 0$

23. $x^2 + 12x - 40 = 0$

24. $x^2 + 13x + 30 = 0$

25. $4x^2 - 3x + 6 = 0$

26. $2x^2 - 39x + 135 = 0$

27. $x^2 = 9x + 120$

28. $2y^2 = 39y - 17$