

Solve each of the following equations using the factoring method. Show all of your work neatly organized.

1. $x^2 + 12x + 35 = 0$

2. $8x^2 - 14x + 3 = 0$

3. $4x^2 + 4x + 1 = 0$

4. $3x^2 = 5x + 2$

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

6. $(2x - 1)^2 = 2x^2 - 3x + 11$

Solve each of the following using the square root property. Show all of your work neatly organized. Express imaginary solutions in bi form. Express all square roots in simplest form (exact value).

7. $9x^2 - 49 = 0$

8. $x^2 + 25 = 0$

9. $3x^2 - 8 = 0$

Algebra II Worksheet #7 Unit 6 page 2

Solve each of the following equations using the complete the square method. Express any rational solutions in simplest form (exact value). Express any irrational solutions rounded to the nearest hundredth. Express any complex solutions using a + bi form (exact value). Show all of your work neatly organized.

10. $x^2 - 2x + 5 = 0$

11. $2x^2 - x - 4 = 0$

12. $x^2 + 8x + 25 = 0$

13. $2x^2 + 3x - 9 = 0$

Solve each of the following equations using the quadratic formula. Express any rational solutions in simplest form (exact value). Express any irrational solutions rounded to the nearest hundredth. Express any complex solutions using a + bi form (exact value). Show all of your work neatly organized.

14. $2x^2 - 3x - 3 = 0$

15. $x^2 - x + 1 = 0$

16. $6x^2 + x - 2 = 0$

17. $9x^2 + 6x + 1 = 0$

Algebra II Worksheet #7 Unit 6 page 3

Solve each of the following equations. Express any rational solutions in simplest form (exact value). Express any irrational solutions rounded to the nearest hundredth. Express any complex solutions using a + bi form (exact value). Show all of your work neatly organized. (Use any method you choose.)

18. $3x^2 - 5x + 1 = 0$

19. $3x^2 - 4x = 0$

20. $9x^2 + 5 = 0$

21. $3x^2 + 2x + 2 = 0$

22. $2x^2 + 5x + 1 = 0$

23. $3x^2 - x - 4 = 0$

24. $8x^2 - 25 = 0$

25. $7x^2 - 10x + 4 = 0$