

Perform the indicated operations.

1. $x(x + 2) =$ _____

2. $x(x - 3) =$ _____

3. $4x(x + 5) =$ _____

4. $3x(x - 4) =$ _____

5. $2x(3x + 4) =$ _____

6. $5x(2x - 7) =$ _____

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

8. $-2x(4x - 3) =$ _____

Factor each of the following.

9. $x^2 + 5x =$ _____

10. $x^2 - 3x =$ _____

11. $4x^2 + 24x =$ _____

12. $2x^2 - 10x =$ _____

13. $8x^2 + 12x =$ _____

14. $14x^2 - 21x =$ _____

15. $-5x^2 + 20x =$ _____

16. $-18x^2 - 45x =$ _____

Perform the indicated operations.

17. $(x + 5)(x - 5) =$ _____

18. $(x - 3)(x + 3) =$ _____

19. $(2x + 3)(2x - 3) =$ _____

20. $(5x - 2)(5x + 2) =$ _____

Factor each of the following.

21. $x^2 - 9 =$ _____

22. $x^2 - 25 =$ _____

23. $25x^2 - 36 =$ _____

24. $81x^2 - 1 =$ _____

Perform the indicated operations.

25. $(x + 6)(x + 2) =$ _____

26. $(x + 8)(x + 3) =$ _____

27. $(x - 1)(x - 9) =$ _____

28. $(x - 6)(x - 6) =$ _____

29. $(x + 3)(x - 7) =$ _____

30. $(x + 2)(x - 5) =$ _____

31. $(x - 2)(x + 3) =$ _____

32. $(x - 4)(x + 8) =$ _____

Algebra II Worksheet #1 Unit 6 page 2

Factor each of the following.

33. $x^2 + 5x + 6 =$ _____

34. $x^2 + 6x + 5 =$ _____

35. $x^2 - 9x + 14 =$ _____

36. $x^2 - 10x + 21 =$ _____

37. $x^2 - 5x - 6 =$ _____

38. $x^2 - 3x - 10 =$ _____

39. $x^2 + 3x - 18 =$ _____

40. $x^2 + 5x - 24 =$ _____

41. $x^2 + 8x + 16 =$ _____

42. $x^2 - 6x + 9 =$ _____

Use the factoring method to solve each of the following equations. Show your process neatly organized.

43. $x^2 + 8x = 0$

44. $4x^2 - 12x = 0$

45. $6x^2 + 9x = 0$

46. $8x^2 - 4x = 0$

47. $x^2 - 9 = 0$

48. $16x^2 - 25 = 0$

49. $81x^2 - 4 = 0$

50. $x^2 + 7x + 12 = 0$

51. $x^2 + 10x + 16 = 0$

52. $x^2 - 15x + 56 = 0$

53. $x^2 - 5x + 6 = 0$

54. $x^2 - 3x - 28 = 0$

55. $x^2 - 2x - 48 = 0$

56. $x^2 + 3x - 4 = 0$

57. $x^2 + 2x - 24 = 0$

58. $x^2 + x - 56 = 0$

59. $x^2 + 12x + 36 = 0$

60. $x^2 - 6x + 9 = 0$