

**General Algebra II Class Worksheet #1 Unit 8 page 1** \_\_\_\_\_

**Perform the indicated operations.**

1.  $x(x + 7) =$  \_\_\_\_\_

2.  $x(x - 1) =$  \_\_\_\_\_

3.  $5x(x + 6) =$  \_\_\_\_\_

4.  $2x(x - 3) =$  \_\_\_\_\_

5.  $3x(4x + 1) =$  \_\_\_\_\_

6.  $4x(5x - 6) =$  \_\_\_\_\_

7.  $-6x(x + 3) =$  \_\_\_\_\_

8.  $-3x(2x - 5) =$  \_\_\_\_\_

**Factor each of the following.**

9.  $x^2 + 6x =$  \_\_\_\_\_

10.  $x^2 - 4x =$  \_\_\_\_\_

11.  $3x^2 + 12x =$  \_\_\_\_\_

12.  $5x^2 - 15x =$  \_\_\_\_\_

13.  $6x^2 + 8x =$  \_\_\_\_\_

14.  $9x^2 - 6x =$  \_\_\_\_\_

15.  $-3x^2 + 9x =$  \_\_\_\_\_

16.  $-6x^2 - 15x =$  \_\_\_\_\_

**Perform the indicated operations.**

17.  $(x + 6)(x - 6) =$  \_\_\_\_\_

18.  $(x - 4)(x + 4) =$  \_\_\_\_\_

19.  $(3x + 5)(3x - 5) =$  \_\_\_\_\_

20.  $(4x - 3)(4x + 3) =$  \_\_\_\_\_

**Factor each of the following.**

21.  $x^2 - 49 =$  \_\_\_\_\_

26.  $x^2 - 4 =$  \_\_\_\_\_

23.  $36x^2 - 25 =$  \_\_\_\_\_

24.  $4x^2 - 81 =$  \_\_\_\_\_

**Perform the indicated operations.**

25.  $(x + 3)(x + 5) =$  \_\_\_\_\_

26.  $(x + 2)(x + 7) =$  \_\_\_\_\_

27.  $(x - 4)(x - 3) =$  \_\_\_\_\_

28.  $(x - 5)(x - 6) =$  \_\_\_\_\_

29.  $(x + 6)(x - 2) =$  \_\_\_\_\_

30.  $(x + 7)(x - 5) =$  \_\_\_\_\_

31.  $(x - 9)(x + 2) =$  \_\_\_\_\_

32.  $(x - 5)(x + 1) =$  \_\_\_\_\_

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**Factor each of the following.**

33.  $x^2 + 11x + 28 =$  \_\_\_\_\_

34.  $x^2 + 10x + 16 =$  \_\_\_\_\_

35.  $x^2 - 4x + 3 =$  \_\_\_\_\_

36.  $x^2 - 15x + 56 =$  \_\_\_\_\_

37.  $x^2 - 4x - 12 =$  \_\_\_\_\_

38.  $x^2 - x - 30 =$  \_\_\_\_\_

39.  $x^2 + 6x - 27 =$  \_\_\_\_\_

40.  $x^2 + 7x - 18 =$  \_\_\_\_\_

41.  $x^2 + 10x + 25 =$  \_\_\_\_\_

42.  $x^2 - 14x + 49 =$  \_\_\_\_\_

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

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

44.  $2x^2 - 10x = 0$

45.  $15x^2 + 20x = 0$

46.  $9x^2 - 3x = 0$

47.  $x^2 - 64 = 0$

48.  $9x^2 - 49 = 0$

49.  $25x^2 - 1 = 0$

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

51.  $x^2 + 11x + 24 = 0$

52.  $x^2 - 13x + 30 = 0$

53.  $x^2 - 9x + 20 = 0$

54.  $x^2 - 5x - 36 = 0$

55.  $x^2 - 4x - 45 = 0$

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

57.  $x^2 + 3x - 10 = 0$

58.  $x^2 + x - 90 = 0$

59.  $x^2 + 8x + 16 = 0$

60.  $x^2 - 10x + 25 = 0$