

# ALEKS® Final Factoring Practice #1

Beginning Algebra / Math 100 Fall 2013 – 506 (Prof. Miller)

Student Name/ID:

**Instructor Note:**

Assignment: Set up a tutoring appointment with one of the campus tutors or with me. At that appointment, learn how to do the problems below and then work through them with the tutor. Have the tutor write and sign their name after you have completed all 40 problems. Then turn in this paper and any other pages you used to do the work. This assignment is worth 30 math dollars. Tutor (print): \_\_\_\_\_  
Tutor (sign): \_\_\_\_\_

1. Factor.

$$4 - 25w^2$$

2. Factor.

$$49v^2 - 64$$

3. Factor by grouping.

$$2u^3 - 5u^2 - 6u + 15$$

4. Factor by grouping.

$$5w^3 + 7w^2 - 25w - 35$$

5. Factor  $6y^2 + 9y^3$ .

6. Find the greatest common factor of  $9x^2$  and  $6y^3$ .

7. Factor  $25y^2 + 20y$ .

8. Factor.

$$y^2 - 12y + 36$$

9. Factor.

$$y^2 - 10y + 16$$

10. Find the greatest common factor of these two expressions.

$$16y^4 u^6 v^2 \text{ and } 24u^8 v^7$$

11. Factor by grouping.

$$5w^3 - 2w^2 - 35w + 14$$

12. Factor.

$$x^2 - 10x + 25$$

13. Factor the following expression.

$$26u^9 x^8 + 6u^3 w^5 x^8$$

14. Factor the following expression.

$$7u^4 xy^3 - 28xy^6$$

15. Find the greatest common factor of  $15a^2$  and  $12n$ .

16. Factor.

$$3y^2 + 16y + 16$$

17. Factor.

$$49 - 9w^2$$

18. Factor.

$$3z^2 - 26z + 16$$

19. Factor.

$$3y^2 + 2y - 16$$

20. Find the greatest common factor of  $9w^3$  and  $8w^2$ .

21. Factor by grouping.

$$u x - 7 x - 3 u + 21$$

22. Factor.

$$4 u^2 - 25$$

23. Factor completely.

$$9 x^5 + 24 x^4 + 12 x^3$$

24. Factor the following expression.

$$30 v^3 x^2 - 12 v^7 w^7 x^2$$

25. Factor by grouping.

$$v y + 3 y - 5 v - 15$$

26. Factor by grouping.

$$u x - 7 x - 3 u + 21$$

27. Find the greatest common factor of  $8y$  and  $11y^3$ .

28. Factor.

$$y^2 + 7y - 18$$

29. Factor.

$$5z^2 + 14z + 8$$

30. Factor completely.

$$9v^7 - 33v^6 + 30v^5$$

31. Factor  $6n^3 + 8n^2$ .

32. Factor.

$$z^2 - 3z - 18$$

33. Factor  $9m^2 - 15m$ .

34. Find the greatest common factor of these two expressions.

$$24v^7u^3 \text{ and } 20v^6u^8w^5$$

35. Factor.

$$5y^2 - 22y - 15$$

36. Factor completely.

$$4u^5 - 18u^4 - 10u^3$$

37. Factor.

$$x^2 + 12x + 20$$

38. Find the greatest common factor of  $10y^2$  and  $25y$ .

39. Factor by grouping.

$$vx + 6v - 5x - 30$$

40. Find the greatest common factor of these two expressions.

$$8y^6 v^7 w^4 \text{ and } 20y^3 w^5$$

41. Factor by grouping.

$$uy - 4u - 7y + 28$$

42. Factor the following expression.

$$3v^7 w^2 x^4 + 21v^3 x^3$$



43. Factor by grouping.

$$2u^3 + 3u^2 - 10u - 15$$

44. Factor.

$$v^2 + 14v + 49$$

45. Factor by grouping.

$$xu + 2u - 3x - 6$$

46. Factor.

$$w^2 - 8w + 16$$

47. Factor by grouping.

$$3w^3 - 7w^2 - 15w + 35$$

48. Factor.

$$9y^2 - 64$$

49. Factor the following expression.

$$20v^6 x^9 y^8 + 16x^7 y^2$$

50. Find the greatest common factor of these two expressions.

$$28u^5 w^3 y^8 \text{ and } 24w^7 y^4$$

51. Factor.

$$w^2 - 16w + 64$$

52. Factor  $25c^2 - 10c^3$ .

53. Factor.

$$3z^2 - 26z + 16$$

54. Factor by grouping.

$$2v^3 + 7v^2 - 12v - 42$$

55. Factor completely.

$$12y^6 + 44y^5 + 40y^4$$

56. Factor.

$$y^2 - 8y + 12$$

57. Find the greatest common factor of these two expressions.

$$12w^4v^7 \text{ and } 20y^8w^5v^2$$

58. Factor.

$$z^2 + z - 20$$

59. Factor completely.

$$10y^5 + 26y^4 - 12y^3$$

60. Factor completely.

$$9x^5 + 24x^4 + 12x^3$$

**Final Factoring Practice #1 Answers for class Beginning Algebra / Math 100**  
**Fall 2013 – 506**

1.  $(2 + 5w)(2 - 5w)$

2.  $(7v + 8)(7v - 8)$

3.  $(2u - 5)(u^2 - 3)$

4.  $(5w + 7)(w^2 - 5)$

5.  $3y^2(2 + 3y)$

6. 3

7.  $5y(5y + 4)$

8.  $(y - 6)^2$

9.  $(y - 2)(y - 8)$

10.  $8u^6v^2$

11.  $(5w - 2)(w^2 - 7)$

12.  $(x - 5)^2$

13.  $2u^3x^8(13u^6 + 3w^5)$

14.  $7xy^3(u^4 - 4y^3)$

15. 3

16.  $(y + 4)(3y + 4)$

17.  $(7 + 3w)(7 - 3w)$

18.  $(z - 8)(3z - 2)$

19.  $(y - 2)(3y + 8)$

20.  $w^2$

21.  $(u - 7)(x - 3)$

22.  $(2u+5)(2u-5)$
23.  $3x^3(x+2)(3x+2)$
24.  $6v^3x^2(5-2v^4w^7)$
25.  $(v+3)(y-5)$
26.  $(u-7)(x-3)$
27.  $y$
28.  $(y-2)(y+9)$
29.  $(z+2)(5z+4)$
30.  $3v^5(v-2)(3v-5)$
31.  $2n^2(3n+4)$
32.  $(z+3)(z-6)$
33.  $3m(3m-5)$
34.  $4v^6u^3$
35.  $(y-5)(5y+3)$
36.  $2u^3(u-5)(2u+1)$
37.  $(x+2)(x+10)$
38.  $5y$
39.  $(x+6)(v-5)$
40.  $4y^3w^4$
41.  $(y-4)(u-7)$
42.  $3v^3x^3(v^4w^2x+7)$
43.  $(2u+3)(u^2-5)$
44.  $(v+7)^2$
45.  $(x+2)(u-3)$
46.  $(w-4)^2$
47.  $(3w-7)(w^2-5)$

48.  $(3y+8)(3y-8)$

49.  $4x^7y^2(5v^6x^2y^6+4)$

50.  $4w^3y^4$

51.  $(w-8)^2$

52.  $5c^2(5-2c)$

53.  $(z-8)(3z-2)$

54.  $(2v+7)(v^2-6)$

55.  $4y^4(y+2)(3y+5)$

56.  $(y-2)(y-6)$

57.  $4w^4v^2$

58.  $(z-4)(z+5)$

59.  $2y^3(y+3)(5y-2)$

60.  $3x^3(x+2)(3x+2)$