

Operations with Polynomials

Chapter

8A

Practice

Assignments

Intermediate ALGEBRA

Name: _____ HR: _____

Concept 1: Name each polynomial by degree and number of terms. Use the sentence frame given in class.

1. $-5x^5 - 5$

2. $-2r^2$

3. $5 + 6p$

4. $n^3 - 2n^4 + 10n - 7n^2$

5. $9p$

6. -4

7. $6x^4 + x^3 + 7x$

8. 6

9. $-7x^2 + 10 + 5x^3$

10. $-6p - 6p^2 + 8p^3$

11. $-3b^6 + 8b^4 - 2 - 7b$

12. $9b^6$

13. $3p + 6b^3 - 10 + 2p^2$

14. $-8x^2$

15. $-9p^3 - 4n^5 + 4 + 7n^4$

16. $8x - 6x^2 - 4$

Concept 2: Simplify each expression.

17. $(5k^4 + 8k - 5k^5) - (k^5 - 7k^4 - 5k)$

18. $(-4a^4 + 5a - 5a^5) - (2a^5 + 5a + 7a^4)$

19. $(-2v^3 + 1 - 8v^5 - 6v^2) - (-3v^3 + 2 + 3v + 5v^5)$

20. $(8b^4 - 5b + 6b^3 - b^5) - (-8b^3 - 8b + 8b^4 + 5b^5)$

21. $(5n^3 + n^4 + 8n^5) + (-6n^5 + 5n^4 - 3n^3) + (-2n^2 - 4n^4 - 2n^3)$

22. $(-7x^2 - 6x - 4) + (-6x^2 - 7x - 8) + (4x - 8 + 4x^2)$

23. $(-2x^2 + 4 - 8x^3 + 4x^5) - (7x^3 + 3x^2 - 2 + 8x^5) + (7x^5 - 2x^3 - 6 + 3x^2)$

24. $(3p^4 - 3p + 5p^5 + 1) - (-4p^5 - 2 - 5p^4 + 8p) + (-2p^5 + 5 + 5p + 8p^4)$

Concept 3: Find each product.

25. $4(-6n^2 + 5n + 1)$

26. $3(-8v^2 - 4v + 1)$

27. $-(-7b^2 + b + 1)$

28. $3n^2(-6n^2 + 6n - 7)$

29. $8x^2(-8x^2 - 8x - 3)$

30. $8a^2(2a^2 - 2a - 5)$

31. $-5(8k^2 + 4x - 3)$

32. $-5(6x^2 + 3x + 7)$

33. $7(7p^2 + 7p + 7)$

34. $-n(-2n^2 + 7n - 8)$

Concept 4: Find each product.

35. $(4b + 1)(b + 2)$

36. $(6v + 6)(7v - 7)$

37. $(8x + 3)(6x + 6)$

38. $(5a + 6)(a + 5)$

39. $(3n - 8)(4n - 8)$

40. $(8k - 6)(5k + 1)$

41. $(6n - 8)(6n + 8)$

42. $(8k + 6)^2$

43. $(p - 6)^2$

44. $(7n - 3)(7n + 3)$

45. $(5x - 8)^2$

46. $(m + 2)^2$

47. $(4r - 1)^2$

48. $(6x + 4)(6x - 4)$

Concept 5: Find each product.

49. $(8k - 8)(8k^2 - 8k - 4)$

50. $(2p + 6)(5p^2 - 4p - 4)$

51. $(8n + 8)(2n^2 + 4n - 4)$

52. $(5x - 6)(3x^2 + 8x - 4)$

53. $(m - 4)(8m^2 + 7m - 5)$

54. $(4r + 1)(6r^2 + 3r - 5)$

55. $(8n - 4)(5n^2 + 4n + 4)$

56. $(7x - 1)(4x^2 - x - 5)$

57. $(m^2 + 4m - 3)(6m - 4)$

58. $(3r^2 + r - 3)(7r - 4)$

CHAPTER 8 PRACTICE TEST

Chapter 8A Concept 1. Name each polynomial by degree and number of terms. Use the sentence frame given in class.

1. $-6n^6 - 6n$

2. $4x - x^2 + 10$

3. $-7p^4 + 4p^3 - 8p - 7p^5 - 8$

4. $3p^2 + 2p - 2$

5. $-4k^5 - 9k^3$

6. $-8n^4$

7. $-8b$

8. $-4x - 6$

9. $2n + 2 - n^3 + 8n^2 + 5n^4$

10. 8

Chapter 8A Concept 2. Simplify each expression.

11. $(-3n^3 - 8 - 8n) - (-3 + 7n - 7n^5)$

12. $(2a - 3 - 2a^2 - 2a^4) - (2a^4 - 1 - 4a - 7a^2)$

13. $(6 - 5x^4 + 4x^3 - 3x^5) - (-8x + 3x^4 + x^3 + 3x^5) + (-6x^3 - 8x^2 - 6x^5 - 7)$

14. $(7x - 5 - 7x^4) + (-3 - 7x - x^2) + (-3x - 8x^4 + x^2)$

Chapter 8A Concept 3. Find each product.

15. $4(8a^2 + 5a - 3)$

16. $-8k^2(-3k^2 + 4k - 7)$

17. $4x^2(-4x^2 + 5x + 7)$

18. $8(-2x^2 - 4x + 7)$

19. $-4(-3n^2 + 4n + 4)$

20. $8(6m^2 - m + 4)$

Chapter 8A Concept 4. Find each product.

21. $(3b + 5)(2b - 2)$

22. $(5v - 7)(8v - 6)$

23. $(8x - 2)(6x - 3)$

24. $(2n - 4)(5n - 7)$

25. $(7m - 5)(7m + 5)$

26. $(5n + 3)^2$

27. $(5x - 6)^2$

28. $(2r + 5)(2r - 5)$

Chapter 8A Concept 5. Find each product.

29. $(b - 4)(6b^2 + 8b + 8)$

30. $(8n - 1)(8n^2 + 4n + 8)$

31. $(7x - 2)(2x^2 - x + 8)$

32. $(4v + 1)(4v^2 + 3v + 8)$

33. $(6x^2 + 3x + 3)(4x + 8)$

34. $(7n^2 + 2n + 2)(3n + 4)$

REVIEW CHAPTER 7 CONCEPT 3. Simplify. Your answer should contain only positive exponents.

35) $\frac{2yx^3}{4x^2y^0}$

36) $\frac{3x^2y^{-4}}{-3y^3}$

37) $-\frac{3u^2v^0}{3u^{-3}v^0}$

38) $\frac{-2a^2b^2}{-a^4b^4}$

REVIEW CHAPTER 5 CONCEPT 6. Sketch the graph of each line.

39) $y = 4x + 5$

40) $y = \frac{1}{4}x - 3$

