Name _____ Class _____ Date _____

Practice 10-1

Example Exercises

Example 1

Write each polynomial in standard form. Then name each polynomial by its degree and the number of its terms.

1. $x + 2x^2$

2. $3n^2 + 6 - 5n$

3. $8 - 2x^3 + 4x^2$

4. $2 + x^2 + 4x$

5. $6 + 7x$

6. $7 - 8a^2 + 6a^3$

7. $y^3 - 4y + 6 - y^2$

8. $x^2 + 4 - x$

9. $x^2 + x^4$

10. $3m - 7m^3 + 3$

11. $5a + 7a^4$

12. $6x^3 + x + x^2$

13. $6 + x^2 - 4x$

14. $x^3 - 8$

15. $y^2 - 7y - 3y^3$

16. $x - 6x^2$

17. $6x + 8x^3 - 2x^2$

18. $12x^2 - 6x^3 + 7 + x$

Example 2

Find each sum. Write your answer in standard form.

19. $(3x^2 - 4) + (5x^2 + 8)$

20. $(5x^3 + 6x^2) + (x^3 - 12x^2)$

21. $(4y^2 - 3y + 8) + (6y^2 + 6y - 9)$

22. $(a^3 + 8a^2 + 6a) + (8a^3 + 2a^2 - 6a)$

23. $(7x^2 + 8x + 1) + (x^2 - 5x - 3)$

24. $(9x^2 + 3x + 4) + (2x^2 + 2x + 1)$

25. $(3a + 4a^3 - 8) + (a^2 + 2a - 7)$

26. $(2x^3 + 6x - 7) + (3x^2 - 9x - 5)$

27. $(3x - 7x^2 - 3) + (x^2 + 5x)$

28. $(3y^3 + 8y^2 - 3) + (2y - 5y^2)$

29. $(5s^2 + 7s - 11) + (s + 4 - 5s^2)$

30. $(6 - 8x) + (7x^3 + 2x + 15)$

31. $(4x^3 + 2x - 3x^2 + 1) + (2x^3 - 5x + 2)$

32. $(3n^4 - 2n^2 + 6) + (2n - 3n^4 - 6)$

33. $(3x + 4x^2 - 8) + (x^3 - 6x + 9x^2)$

34. $(9 - 5x^3 - 6x^2) + (x + 6x^3 - 4)$

Example 3

Find each difference. Write your answer in standard form.

35. $(5x^2 + 4x + 8) - (3x^2 + x + 3)$

36. $(8x^2 - 4x + 1) - (3x^2 + 6x - 4)$

37. $(7y^3 + 2y - 7) - (2y^3 + y + 3)$

38. $(n^3 + n^2 + n) - (2n^3 + 3n^2 - 2n)$

39. $(x^3 + 3x^2 - 4x) - (2x^2 + 3x + 1)$

40. $(4x^2 - 7x + 8) - (2x^3 + 8x - 5)$

41. $(3c^2 + 4c - 6) - (3c + 8)$

42. $(2y^3 - 7y + 10) - (y^3 + 6y - 7)$

43. $(5y^2 - 9y + 11) - (4y + 8 - y^2)$

44. $(7c^2 - 10c + 1) - (9 + 2c^2 - 8c)$

45. $(2x - 10x^2 + 7) - (x^2 + 8)$

46. $(3x^3 - 10x + 8) - (2x^2 + 7x + 8)$

47. $(x^2 + 7x^3) - (3x^2 + 4x - 12)$

48. $(x + 3x^2 - 4x^3 + 6) - (x^3 + 3x^2 + x)$

49. $(x^2 - 3 + 7x) - (2x^3 + 3x^2 - 7x)$

50. $(6x^3 - 9 + 8x) - (2x^2 + 6x - 11)$