

# Practice 9-1

## Adding and Subtracting Polynomials

Write each polynomial in standard form. Then name each polynomial based on its degree and number of terms.

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|--------------------------|----------------------|--------------------------|
| 1. $4y^3 - 4y^2 + 3 - y$ | 2. $x^2 + x^4 - 6$   | 3. $x + 2$               |
| 4. $2m^2 - 7m^3 + 3m$    | 5. $4 - x + 2x^2$    | 6. $7x^3 + 2x^2$         |
| 7. $n^2 - 5n$            | 8. $6 + 7x^2$        | 9. $3a^2 + a^3 - 4a + 3$ |
| 10. $5 + 3x$             | 11. $7 - 8a^2 + 6a$  | 12. $5x + 4 - x^2$       |
| 13. $2 + 4x^2 - x^3$     | 14. $4x^3 - 2x^2$    | 15. $y^2 - 7 - 3y$       |
| 16. $x - 6x^2 - 3$       | 17. $v^3 - v + 2v^2$ | 18. $8d + 3d^2$          |

Simplify. Write each answer in standard form.

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|---|--|
| 19. $(3x^2 - 5x) - (x^2 + 4x + 3)$          | 20. $(2x^3 - 4x^2 + 3) + (x^3 - 3x^2 + 1)$   |
| 21. $(3y^3 - 11y + 3) - (5y^3 + y^2 + 2)$   | 22. $(3x^2 + 2x^3) - (3x^2 + 7x - 1)$        |
| 23. $(2a^3 + 3a^2 + 7a) + (a^3 + a^2 - 2a)$ | 24. $(8y^3 - y + 7) - (6y^3 + 3y - 3)$       |
| 25. $(x^2 - 6) + (5x^2 + x - 3)$            | 26. $(5n^2 - 7) - (2n^2 + n - 3)$            |
| 27. $(5n^3 + 2n^2 + 2) - (n^3 + 3n^2 - 2)$  | 28. $(3y^2 - 7y + 3) - (5y + 3 - 4y^2)$      |
| 29. $(2x^2 + 9x - 17) + (x^2 - 6x - 3)$     | 30. $(3 - x^3 - 5x^2) + (x + 2x^3 - 3)$      |
| 31. $(3x + x^2 - x^3) - (x^3 + 2x^2 + 5x)$  | 32. $(d^2 + 8 - 5d) - (5d^2 + d - 2d^3 + 3)$ |
| 33. $(3x^3 + 7x^2) + (x^2 - 2x^3)$          | 34. $(6c^2 + 5c - 3) - (3c^2 + 8c)$          |
| 35. $(3y^2 - 5y - 7) + (y^2 - 6y + 7)$      | 36. $(3c^2 - 8c + 4) - (7 + c^2 - 8c)$       |
| 37. $(4x^2 + 13x + 9) + (12x^2 + x + 6)$    | 38. $(2x - 13x^2 + 3) - (2x^2 + 8x)$         |
| 39. $(7x - 4x^2 + 11) + (7x^2 + 5)$         | 40. $(4x + 7x^3 - 9x^2) + (3 - 2x^2 - 5x)$   |
| 41. $(y^3 + y^2 - 2) + (y - 6y^2)$          | 42. $(x^2 - 8x - 3) - (x^3 + 8x^2 - 8)$      |
| 43. $(3x^2 - 2x + 9) - (x^2 - x + 7)$       | 44. $(2x^2 - 6x + 3) - (2x + 4x^2 + 2)$      |
| 45. $(2x^2 - 2x^3 - 7) + (9x^2 + 2 + x)$    | 46. $(3a^2 + a^3 - 1) + (2a^2 + 3a + 1)$     |
| 47. $(2x^2 + 3 - x) - (2 + 2x^2 - 5x)$      | 48. $(n^4 - 2n - 1) + (5n - n^4 + 5)$        |
| 49. $(x^3 + 3x) - (x^2 + 6 - 4x)$           | 50. $(7s^2 + 4s + 2) + (3s + 2 - s^2)$       |
| 51. $(6x^2 - 3x + 9) - (x^2 + 3x - 5)$      | 52. $(3x^3 - x^2 + 4) + (2x^3 - 3x + 9)$     |
| 53. $(y^3 + 3y - 1) - (y^3 + 3y + 5)$       | 54. $(3 + 5x^3 + 2x) - (x + 2x^2 + 4x^3)$    |
| 55. $(x^2 + 15x + 13) + (3x^2 - 15x + 7)$   | 56. $(7 - 8x^2) + (x^3 - x + 5)$             |
| 57. $(2x + 3) - (x - 4) + (x + 2)$          | 58. $(x^2 + 4) - (x - 4) + (x^2 - 2x)$       |