Name:_____

9.1 P. 557 # 3-15 odd, 17 - 28, 30, 31, 43 - 48

REWRITING POLYNOMIALS Write the polynomial so that the exponents decrease from left to right. Identify the degree and leading coefficient of the polynomial.

3. $9m^5$

5. $2x^2y^2 - 8xy$

7. $5z + 2z^3 - z^2 + 3z^4$

9. ★ **MULTIPLE CHOICE** What is the degree of $-4x^3 + 6x^4 - 1$?

Ⓐ -4 Ⓑ 3 Ⓒ 4 Ⓓ 6

IDENTIFYING AND CLASSIFYING POLYNOMIALS Tell whether the expression is a polynomial. If it is a polynomial, find its degree and classify it by the number of its terms. Otherwise, tell why it is not a polynomial.

11. -4^x

13. $3x - 5$

15. $6 - n^2 + 5n^3$

ADDING AND SUBTRACTING POLYNOMIALS Find the sum or difference.

17. $(5a^2 - 3) + (8a^2 - 1)$

18. $(h^2 + 4h - 4) + (5h^2 - 8h + 2)$

19. $(4m^2 - m + 2) + (-3m^2 + 10m + 7)$

20. $(7k^2 + 2k - 6) + (3k^2 - 11k - 8)$

21. $(6c^2 + 3c + 9) - (3c - 5)$

22. $(3x^2 - 8) - (4x^3 + x^2 - 15x + 1)$

23. $(-n^2 + 2n) - (2n^3 - n^2 + n + 12)$

24. $(9b^3 - 13b^2 + b) - (-13b^2 - 5b + 14)$

25. $(4d - 6d^3 + 3d^2) - (9d^3 + 7d - 2)$

26. $(9p^2 - 6p^3 + 3 - 11p) + (7p^3 - 3p^2 + 4)$

ERROR ANALYSIS *Describe* and correct the error in finding the sum or difference of the polynomials.

27.

$$x^3 - 4x^2 + 3$$
$$+ \; -3x^3 + 8x - 2$$
$$\overline{ -2x^3 + 4x^2 + 1}$$

✗

28.

$$(6x^2 - 5x) - (2x^2 + 3x - 2)$$
$$= (6x^2 - 2x^2) + (-5x + 3x) - 2$$
$$= 4x^2 - 2x - 2$$

✗

GEOMETRY Write a polynomial that represents the perimeter of the figure.

30.

2x + 6
x + 8
9x − 6

31.

3x − 2
2x
2x + 1
5x − 2
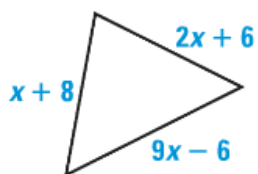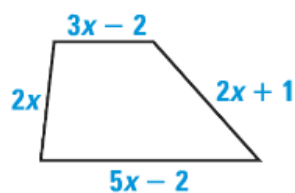
Simplify the expression.

43. $0.6(3 - x)$

44. $4(y + 6)$

45. $4(1 - b) - 5b$

46. $-4(16c - 8)$

47. $(6t^7)^2$

48. $n(2m^2n)$