Name _____ Date _____

2.1 Practice A

In Exercises 1–3, find the degree of the monomial.

1. $7n^3$ **2.** $\frac{1}{3}x^5$ **3.** w^2y^5

In Exercises 4–6, write the polynomial in standard form. Identify the degree and leading coefficient of the polynomial. Then classify the polynomial by the number of terms.

4. $5h - 4h^3 - 2$ **5.** $10 + 4p^3$ **6.** $6v^7$

7. The expression $-16t^2 + 20t + 100$ represents the height of an object t seconds after it is dropped from a height of 100 feet. Why is this expression a trinomial? What is its degree?

In Exercises 8–11, find the sum.

8. $(7t + 6) + (-4t - 2)$ **9.** $(-12v + 3) + (8v - 7)$

10. $(3j^2 - 7j + 1) + (-6j^2 - 4j + 9)$ **11.** $(2w^2 - 7w + 3) + (2w^2 + 8w)$

In Exercises 12–15, find the difference.

12. $(p - 5) - (4p - 7)$ **13.** $(8w + 3) - (9w + 6)$

14. $(3y^2 - 6y + 9) - (6y^2 - 7y - 2)$ **15.** $(5b^2 - 6b - 9) - (-2b^2 + 8b - 1)$

16. Describe and correct the error in finding the sum.

$$\begin{aligned} (x^3 - 8x + 2) + (3x^3 + 7x + 6) &= x^3 - 8x + 2 + 3x^3 + 7x + 6 \\ &= (x^3 + 3x^3) - (8x + 7x) + (2 + 6) \\ &= 4x^3 - 15x + 8 \end{aligned}$$

In Exercises 17 and 18, find the sum or difference.

17. $(3p^2 - 6pq + 7q^2) - (p^2 - 5pq + 9q^2)$

18. $(x^2 - 4xy + 9y^2) + (-8x^2 + 6xy - y^2)$

19. Your friend says that when subtracting polynomials, the order in which you subtract does not matter. Is your friend correct? Explain.