NAME DATE SCORE

# Exponents; Adding and Subtracting Polynomials

**(For use after Section 4–2)**

**Select each answer from the choices in parentheses. Write the answer in the blank.**

1. In $5x^2$, 5 is called the _____. *(base, variable, coefficient)*
2. In $b^n$, $b$ is called the _____. *(base, exponent, power)*
3. $9x + 5$ is a _____. *(monomial, binomial, trinomial)*
4. The degree of $8x^2y^3$ is _____. *(2, 3, 5)*
5. The degree of $8x^2 + x^3$ is _____. *(2, 3, 5)*

**Write each expression in exponential form.**

6. $a \cdot a \cdot a$ _____ 7. $2 \cdot x \cdot x \cdot 2$ _____ 8. $(-3)(x)(x)(x)(x)$ _____
9. The fifth power of twice $y$ _____ 10. The square of negative $t$ _____

**Simplify.**

11. $-5^2(2^3)$ _____ 12. $(-5)^2(1)^3$ _____ 13. $8(9 - 3)^2$ _____
14. $(-3 \cdot 4)^2$ _____ 15. $-(3 \cdot 4)^2$ _____ 16. $(5 \cdot 4 - 8)^2$ _____

**Evaluate if $x = 3$ and $y = -4$.**

17. $(x + y)^2$ _____ 18. $x^3 + y^3$ _____ 19. $\left(\frac{5y}{x + 2}\right)^2$ _____

**Add.**

20. $9x + 3$
$5x - 4$

21. $5c^2 + 3cd - d^2$
$c^2 - 2cd - d^2$

22. $3x - 4y + xy$
$y - xy$
$5x - 3y$

**Subtract the lower polynomial from the one above it.**

23. $9n - 1$
$n - 5$

24. $5x - y - 12$
$-x + y - 10$

25. $3x^2 - 5x - 1$
$5x^2 - 5x + 1$

**Simplify.**

26. $(9n^2 + 1) - (5 - 7n^2)$ _____ 27. $(x^3 - 5x^2 + x) + (x - x^2)$ _____

**Solve.**

28. $2n - (3n + 2) = 6$ _____ 29. $(2n + 1) - (4 - 6n) = 4n$ _____