NAME _____ DATE _____ PERIOD _____

7-1 Extra Practice *Multiplication Properties of Exponents*

Determine whether each expression is a monomial. Write *yes* or *no*. Explain.

1. 11 Yes; 11 is a real number and an example of a constant.

2. $a - b$ No; this is the difference, not the product, of two variables.

3. $\frac{p^2}{r^2}$ No; this is the quotient, not the product, of two variables.

4. y Yes; single variables are monomials.

5. j^3k Yes; this is the product of two variables.

6. $2a + 3b$ No; this is the sum of two monomials.

Simplify.

7. $a^2(a^3)(a^6)$ a^{11}

8. $x(x^2)(x^7)$ x^{10}

9. $(y^2z)(yz^2)$ y^3z^3

10. $(\ell^2k^2)(\ell^3k)$ ℓ^5k^3

11. $(a^2b^4)(a^2b^4)$ a^4b^8

12. $(cd^2)(c^3d^2)$ c^4d^4

13. $(2x^2)(3x^5)$ $6x^7$

14. $(5a^7)(4a^2)$ $20a^9$

15. $(4xy^3)(3x^3y^5)$ $12x^4y^8$

16. $(7a^5b^2)(a^2b^3)$ $7a^7b^5$

17. $(-5m^3)(3m^8)$ $-15m^{11}$

18. $(-2c^4d)(-4cd)$ $8c^5d^2$

19. $(10^2)^3$ 10^6 or 1,000,000

20. $(p^3)^{12}$ p^{36}

21. $(-6p)^2$ $36p^2$

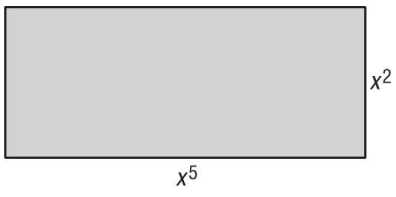
22. $(-3y)^3$ $-27y^3$

23. $(3pr^2)^2$ $9p^2r^4$

24. $(2b^3c^4)^2$ $4b^6c^8$

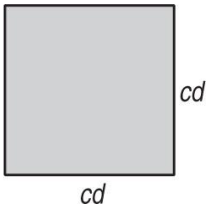
GEOMETRY Express the area of each figure as a monomial.

25.



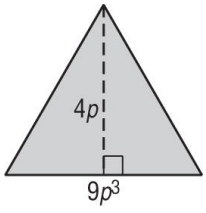
x^7

26.



c^2d^2

27.



$18p^4$