Name _____ Date _____ Class _____

LESSON 7-3

Practice A

Multiplication Properties of Exponents

Complete each equation to show the property.

1. $a^m \cdot a^n =$ _____ **2.** $(a^m)^n =$ _____ **3.** $(ab)^n =$ _____

Simplify.

4. $7^5 \cdot 7^8$

$7^{\square + \square}$

$7^{\square}$

5. $3^{-2} \cdot 3^7$

$3^{\square + \square}$

$3^{\square}$

6. $x^3 \cdot x^{-5}$

$x^{\square + \square}$

$x^{\square}$

7. $a^2 \cdot b^6 \cdot b^{-2}$

_____

8. $n^5 \cdot n^{-1} \cdot n^{-3}$

_____

9. $r^{-4} \cdot s^5 \cdot r^6$

_____

10. $(2^3)^4$

$2^{\square \cdot \square}$

$2^{\square}$

11. $(4^0)^5$

$4^{\square \cdot \square}$

$4^{\square}$

____

12. $(b^2)^{-4}$

$b^{\square \cdot \square}$

$b^{\square}$

$\frac{\square}{\square}$

13. $(3n)^4$

$3^{\square} n^{\square}$

_____

14. $(2x)^3$

$2^{\square} x^{\square}$

_____

15. $(t^3)^4 \cdot t^3$

$t^{\square \cdot \square} \cdot t^3$

$t^{\square} \cdot t^3$

$t^{\square + \square}$

16. $(b^4)^2 \cdot (b^3)^3 \cdot b^{-2}$

_____

17. $(a^2)^3 \cdot a^{-6}$

_____

18. $(c^{-5})^2 \cdot (c^3)^{-2}$

_____

19. The volume of a cube can be found by using the formula $V = s^3$, where s represents the length of each side of the cube. Find the volume of a cube if each side is $4a^2b^4$.

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