

Practice 4-7

Exponents and Multiplication

Complete each equation.

1. $9^3 \cdot 9 \text{ --- } = 9^7$

2. $6^8 \cdot 6 \text{ --- } = 6^{17}$

3. $n \text{ --- } \cdot n^5 = n^{15}$

4. $(a \text{ --- })^8 = a^{24}$

5. $(c^4) \text{ --- } = c^{12}$

6. $r \text{ --- } \cdot r^{12} = r^{20}$

Simplify each expression.

7. $(z^3)^5$ _____

8. $-(m^4)^3$ _____

9. $(-3^2)^3$ _____

10. $(x^3)(x^4)$ _____

11. $y^4 \cdot y^5$ _____

12. $(-y^5)(y^2)$ _____

13. $(3y^2)(2y^3)$ _____

14. $3x^{12} \cdot 2x^3$ _____

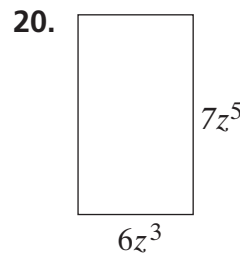
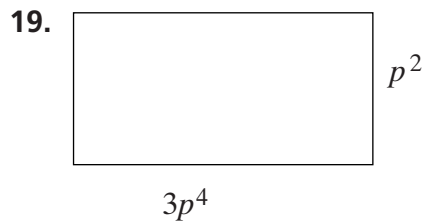
15. $m^{30} \cdot m^{12}$ _____

16. $(x^4)(y^2)(x^2)$ _____

17. $(-6x^7)(-9x^{12})$ _____

18. $(h^4)^4$ _____

Find the area of each rectangle.



Compare. Use $>$, $<$, or $=$ to complete each statement.

21. $(4^3)^2$ $(4^2)^3$

22. $5^3 \cdot 5^4$ 5^{10}

23. $(3^5)^4$ 3^{10}

24. 3^4 9^2

25. $(9^7)^9$ $(9^8)^8$

26. $4^2 \cdot 4^3$ 4^5

27. $(6^2)^2$ $3^4 \cdot 2^4$

28. $5^2 \cdot 5^6$ 5^7

29. $(8^2)^2$ $(8^2)^3$

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