

Practice 3-1

Exponents and Order of Operations

Write using exponents.

- | | |
|--|--|
| 1. $3 \times 3 \times 3 \times 3 \times 3$ _____ | 2. $2.7 \times 2.7 \times 2.7$ _____ |
| 3. $11.6 \times 11.6 \times 11.6 \times 11.6$ _____ | 4. $2 \times 2 \times 2 \times 2 \times 2 \times 2$ _____ |
| 5. $8.3 \times 8.3 \times 8.3 \times 8.3 \times 8.3$ _____ | 6. $4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4 \times 4$ _____ |

Write as the product of repeated factors. Then simplify.

7. $(0.5)^3$ _____
8. $(-4)^5$ _____
9. $(2.7)^2$ _____
10. 2^3 _____
11. $(-5)^6$ _____
12. $(8.1)^3$ _____

Simplify. Use a calculator, paper and pencil, or mental math.

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|-----------------------------------|---------------------------------------|-------------------------------|------------------------------|
| 13. -4^3
_____ | 14. $8^3 + 9$
_____ | 15. $11 + (-6^3)$
_____ | 16. $14 + 16^2$
_____ |
| 17. $8 + 6^4$
_____ | 18. $2^5 + 2^3$
_____ | 19. $3^2 \cdot 5^4$
_____ | 20. $6^2 - 2^4$
_____ |
| 21. $4(0.9 + 1.3)^3$
_____ | 22. $-3(1.5 - 0.2)^3$
_____ | 23. $35 - (4^2 + 5)$
_____ | 24. $(3^3 + 6) - 7$
_____ |
| 25. $5(0.3 \cdot 1.2)^2$
_____ | 26. $-18 \div (1.4 - 0.4)^2$
_____ | 27. $5(4 + 2)^2$
_____ | 28. $(8 - 6.7)^3$
_____ |
29. The volume of an aquarium is approximately 4.3^3 ft^3 . Find the volume of the aquarium.

30. Lana is 2^3 in. taller than her little sister. How many inches taller is Lana than her sister?
