LESSON 1.2

NAME _____ DATE _____

Practice B

For use with pages 9–14

Write the expression in exponential form.

1. three to the fifth power

2. nine squared

3. y to the seventh power

4. four to the wth power

5. $5a$ cubed

6. $4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 \cdot b \cdot b$

7. $a \cdot a \cdot a$

8. $x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x \cdot x$

9. $3x \cdot 3x \cdot 3x \cdot 3x$

Evaluate the power.

10. 6^2

11. 5^3

12. 12^2

13. 4^4

14. 0.3^4

15. 10^6

Evaluate the expression for the given value(s) of the variable(s).

16. 3^x when $x = 6$

17. a^3 when $a = 10$

18. y^2 when $y = 3.5$

19. $6x^2$ when $x = 5$

20. $24 - y^2$ when $y = 3$

21. $(x - y)^4$ when $x = 10$ and $y = 3$

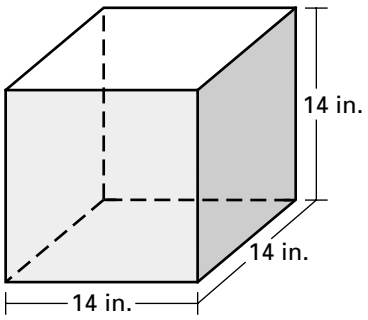
22. $a^2 + b^3$ when $a = 7$ and $b = 8$

23. $a + b^3$ when $a = 3$ and $b = 2$

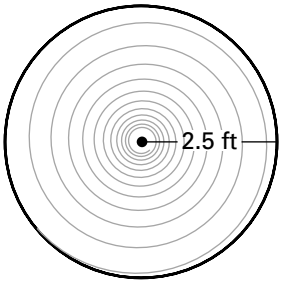
24. $(7x - 8)^2$ when $x = 2$

25. $(2y)^2 - x^2$ when $x = 3$ and $y = 2$

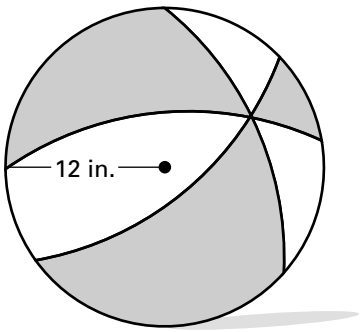
26. ***Safe Storage*** A safe has a cubical storage space inside. What is the volume of a safe with an interior length of 14 inches?



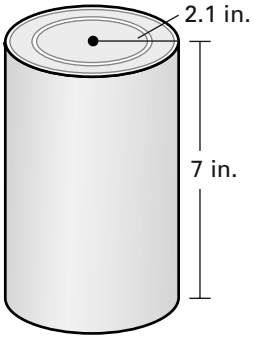
27. ***Area Rug*** A circular area rug has a radius of 2.5 feet. How much area does the rug cover? (The area of a circle is $A = \pi r^2$ where $\pi \approx 3.14$ and r is the radius.)



28. ***Beach Ball*** When blown up, a beach ball has a radius of 12 inches. How much air, in cubic feet, is needed to blow up the beach ball? (The volume of a sphere is $V = \frac{4}{3}\pi r^3$ where $\pi \approx 3.14$ and r is the radius.)



29. ***Cylindrical Can*** A can has a radius of 2.1 inches and a height of 7 inches. What is the volume of the can? (The volume of a cylinder is $V = \pi r^2 h$ where $\pi \approx 3.14$, r is the radius, and h is the height.)



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