Answers for Lesson 8-7, pp. 390–391 Exercises

1. 15 m^3
2. C
3. B
4. A
5. 72 $in.^3$
6. 96 cm^3
7. 2 m^3
8. 4,524 cm^3
9. 13 ft^3
10. 367 m^3
11. 5 cm
12. about 13 cm
13. 603 cm^3
14. 13 m^3
15. no; because the radius is squared in the formula, and the height is not
16. 5 in.
17. 1.67 ft
18. Suppose the original volume is $\frac{1}{3}b^2h$. If the dimensions are doubled, the new volume is $\frac{1}{3}(2b)^2(2h)$, which simplifies to $\frac{8}{3}b^2h$. The new volume is 8 times the original.
19. Each volume formula involves the product of the height h and the base area B. You can substitute the appropriate area formula for B when finding the volume. For cones and pyramids, you must also multiply the product by $\frac{1}{3}$.
20. about 127 $in.^3$
21. A
22. H
23. A
24. 2,714 ft^2