Answers for Lesson 8-8, pp. 395–396 Exercises

1. C
2. A
3. B
4. $4(3.14)(1)^2$
5. 12.6 m^2
6. 4.2 m^3
7. 1,810 cm^2; 7,238 cm^3
8. 314 $in.^2$; 524 $in.^3$
9. 95 m^2; 87 m^3
10. 804 yd^2; 2,145 yd^3
11. 380 ft^2; 697 ft^3
12. 515 mm^2; 1,098 mm^3
13. about 110 cm^3
14. about 3.7165×10^8 km^2
15. about 1.5 $in.^2$
16. 50 $in.^2$
17. She forgot to divide by 3.
18. 113 cm^2; 113 cm^3
19. 5,027 mm^2; 33,510 mm^3
20. 50 mm^2; 34 mm^3
21. 5 cm^2; 1 cm^3
22. a. 25 $in.^3$

    b. 37 $in.^3$
23. 83 cm^2; 64 cm^3
24. Since $S.A. = 4\pi r^2$, you can solve for r by dividing $\frac{S.A.}{4\pi}$ and taking the square root. Therefore, $r = \sqrt{\frac{S.A.}{4\pi}}$. Then you can substitute into $\frac{4}{3}\pi r^3$ to get the volume of the sphere.
25. about 3,397 km
26. 333
27. 754
28. 412
29. 14 $in.^3$
30. 134 cm^3
31. 112 ft^3