12 CHAPTER TEST

Find the number of faces, vertices, and edges of the polyhedron. Check your answer using Euler's Theorem.

1.

2.

3.
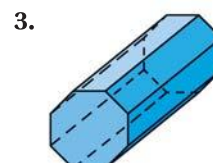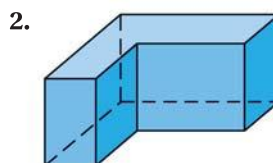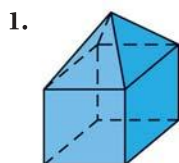
Find the surface area of the solid. The prisms, pyramids, cylinders, and cones are right. Round your answer to two decimal places, if necessary.

4. 8 ft, 5 ft, 4 ft

5. 5.7 in., 1.6 in., 3.2 in.

6. 10 m, 4.1 m

7. 9 cm, 7 cm, 7 cm
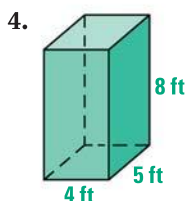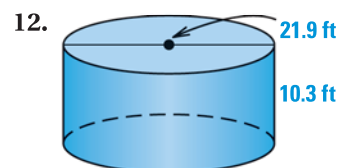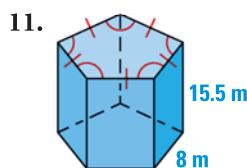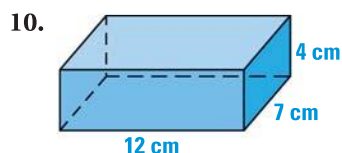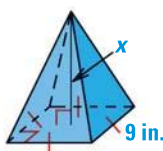
8. 18.3 in., 14.6 in.

9. 4 ft, 8 ft, 7 ft
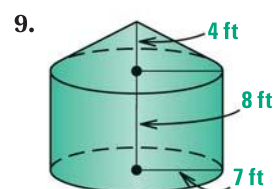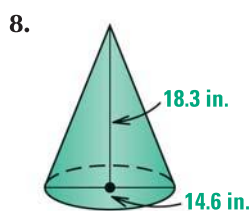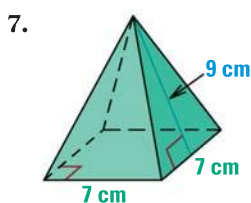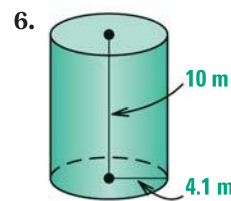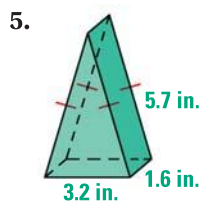
Find the volume of the right prism or right cylinder. Round your answer to two decimal places, if necessary.

10. 4 cm, 7 cm, 12 cm

11. 15.5 m, 8 m

12. 21.9 ft, 10.3 ft

In Exercises 13–15, solve for x.

13. Volume = 324 in.^{3}

14. Volume = $\frac{32\pi}{3}$ ft^3

15. Volume = 180π cm^3

9 in.

x

x, 15 cm
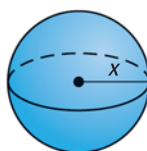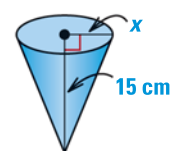
16. MARBLES The diameter of the marble shown is 35 millimeters. Find the surface area and volume of the marble.

17. PACKAGING Two similar cylindrical cans have a scale factor of 2 : 3. The smaller can has surface area 308π square inches and volume 735π cubic inches. Find the surface area and volume of the larger can.