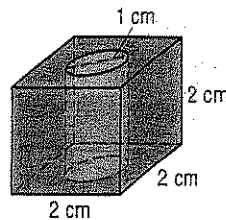


Part I Write the letter for the correct answer in the blank at the right of each question.

- Choose the formula for the volume of a cylinder. 1. _____
 A. $V = \pi r^2 h$ B. $V = \frac{\pi r^2 h}{3}$ C. $V = 4\pi r^2$ D. $V = \frac{4\pi r^3}{3}$
- The volume of a cube is 216 cubic meters. Find the length of an edge. 2. _____
 A. 72 m B. 36 m C. 12 m D. 6 m
- A rectangular aquarium is 18 inches long and 12 inches wide and contains 1620 cubic inches of water. Find the depth of the water. 3. _____
 A. 15 in. B. 10 in.
 C. 7.5 in. D. 3.75 in.
- How does the volume of a cone change when its radius is doubled? 4. _____
 A. The volume is multiplied by 2. B. The volume is multiplied by 4.
 C. The volume is multiplied by 8. D. The volume is divided by 2.
- The surface area of a sphere is equal to its volume. Find the radius. 5. _____
 A. 1 unit B. 3 units
 C. 9 units D. cannot be determined

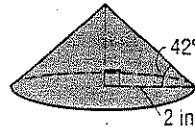
Part II

6. Find the volume of this bead to the nearest centimeter. 6. _____



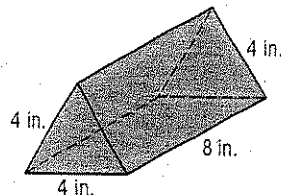
7. Find the volume of a square pyramid whose slant height is 13 centimeters and whose base has sides that are each 24 centimeters long. 7. _____

8. Find the volume to the nearest tenth. 8. _____



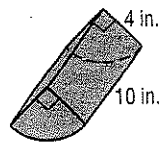
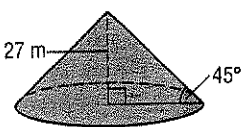
9. A sphere has a surface area that is 169π square centimeters. Find the volume to the nearest tenth. 9. _____

10. Find the volume. 10. _____



Write the letter for the correct answer in the blank at the right of each question.

1. Which of the following is the formula for the volume of a prism? 1. _____
 A. $V = 2\pi r^2 + 2\pi rh$ B. $V = ph$ C. $V = \pi r^2$ D. $V = Bh$

12. The lateral area of a cube is 324 square centimeters. Find the volume. 12. _____
 A. 9 cm^3 B. 81 cm^3 C. 729 cm^3 D. 972 cm^3
13. Find the volume to the nearest tenth. 13. _____
 A. 31.4 in^3 B. 41.9 in^3 C. 125.7 in^3 D. 502.7 in^3
- 
14. A cylinder has a radius that is 7 inches long and a height that is 10 inches long. Find the volume to the nearest tenth. 14. _____
 A. 1539.4 in^3 B. 490.0 in^3 C. 219.9 in^3 D. 70.0 in^3
15. A right triangular pyramid has a 12-meter height and a base with legs that are 3 meters and 4 meters long. Find the volume. 15. _____
 A. 144 m^3 B. 72 m^3 C. 48 m^3 D. 24 m^3
16. The volume of a square pyramid is 100 cubic feet and the height is 10 feet long. Find the length of a side of the base. 16. _____
 A. 15 ft B. $\sqrt{30}$ ft C. 7.5 ft D. $\sqrt{5}$ ft
17. The volume of a cone is 336π cubic feet and the height is 7 feet long. Find the radius. 17. _____
 A. 144 ft B. 36 ft C. 24 ft D. 12 ft
18. Find the volume to the nearest tenth. 18. _____
 A. $41,224.0 \text{ m}^3$ B. $20,612.0 \text{ m}^3$ C. $10,306.0 \text{ m}^3$ D. 763.4 m^3
- 
19. A sphere has a 48-centimeter diameter. Find the volume to the nearest tenth. 19. _____
 A. $463,246.7 \text{ cm}^3$ B. $57,905.8 \text{ cm}^3$ C. $28,952.9 \text{ cm}^3$ D. 7238.2 cm^3
20. A sphere has a volume that is 288π cubic inches. Find the radius. 20. _____
 A. 3 in. B. 6 in. C. 8 in. D. 12 in.
21. A sphere has a 10-centimeter radius and a cone has a 15-centimeter height and a base with an 8-centimeter radius. Compare their volumes. 21. _____
 A. The volume of the sphere is greater.
 B. The volume of the cone is greater.
 C. Their volumes are equal.
 D. not enough information
22. A beach ball has an 18-inch diameter and a kick ball has a 12-inch diameter. Find the difference of the volumes to the nearest tenth. 22. _____
 A. $17,190.8 \text{ in}^3$ B. 2148.8 in^3 C. 188.5 in^3 D. 113.1 in^3

Be able to define or name the formula for volume for each term listed.

- | | | | |
|--------------------|----------|------------|-----------|
| * Congruent Solids | * Volume | * Cylinder | * prism |
| * Similar Solids | * Cone | * sphere | * pyramid |