

Study Guide

| Question(s) | Section(s) | Refer to | The student can ... |
|-------------|-------------------|-------------------------------------|--|
| 1, 3, 7 | 7.1 7.2 | Example 1 Example 1 | ✓ determine the volume of a right rectangular prism, right triangular prism, and right cylinder ✓ use a formula to determine the volume of a right rectangular prism |
| 2 | 7.1 7.2 | Example 1 Example 2 | ✓ determine the volume of a right rectangular prism, right triangular prism, ✓ use a formula to determine the volume of a right triangular prism |
| 6 | 7.1 | Example 1 | ✓ explain the meaning of volume |
| 9, 13 | 7.2 | Example 3 | ✓ use a formula to determine the volume of a right triangular prism |
| 11 | 7.2 7.3 7.4 | Example 2 Example 1 Example 3 | ✓ use a formula to determine the volume of a right triangular prism ✓ use a formula to determine the volume of a cylinder ✓ solve problems involving right rectangular prisms, right triangular prisms, right cylinders |
| 4, 10 | 7.3 | Example 2 | ✓ use a formula to determine the volume of a cylinder |
| 8 | 7.3 | Example 1 | ✓ use a formula to determine the volume of a cylinder |
| 5, 12, 13 | 7.4 | Example 3 | ✓ solve problems involving right rectangular prisms, right triangular prisms, right cylinders |
| 14, 15 | 7.4 | Example 1 | ✓ solve problems involving right rectangular prisms, right triangular prisms, right cylinders |
| 16 | 7.4 | Example 2 | ✓ solve problems involving right rectangular prisms, right triangular prisms, right cylinders |

Answers

Chapter 7 Practice Test

1. C 2. B 3. D 4. C 5. B 6. 7 cm 7. 72 cm^3
 8. 2070340 cm^3 9. 60534 cm^3 10. 1373.75 cm^3
 11. Answers may vary. Example: The cylindrical container is larger. The volume of the cylinder is 12308.8 cm^3 . The volume of the triangular prism is 11200 cm^3 .
 12. 50289.3 cm^3 13. 19 cans
 14. a) 21.78 L b) 15.246 L
 15. a) 5.4 m^3 b) \$594.00

16. a) Answers may vary. Example: Three possible dimensions for the box are $20 \text{ cm} \times 30 \text{ cm} \times 50 \text{ cm}$; $20 \text{ cm} \times 20 \text{ cm} \times 75 \text{ cm}$; and $40 \text{ cm} \times 30 \text{ cm} \times 25 \text{ cm}$.
 b) 30000 cm^3 c) 6450 cm^3
 d) Answers may vary. Example: Use the box with the smallest surface area.
 • The box with dimensions of $40 \text{ cm} \times 30 \text{ cm} \times 25 \text{ cm}$ has a surface area of 5900 cm^2 . This box has the smallest surface area.
 • The box with dimensions of $20 \text{ cm} \times 30 \text{ cm} \times 50 \text{ cm}$ has a surface area of 6200 cm^2 .
 • The box with dimensions of $20 \text{ cm} \times 20 \text{ cm} \times 75 \text{ cm}$ has a surface area of 6800 cm^2 .

| Assessment | Supporting Learning |
|---|---|
| Assessment as Learning | |
| Chapter 7 Self-Assessment Have students review their earlier responses in the What I Need to Work On section of their chapter Foldable. | <ul style="list-style-type: none"> • Have students use their responses on the practice test and work they completed earlier in the chapter to identify areas in which they may need to reinforce their understanding of skills or concepts. Before the chapter test, coach them in the areas in which they are having difficulties. |
| Assessment of Learning | |
| Chapter 7 Test After students complete the practice test, you may wish to use BLM 7–13 Chapter 7 Test as a summative assessment. | <ul style="list-style-type: none"> • Encourage students to draw and label drawings when appropriate to help solve problems. • Consider allowing students to use their chapter Foldable. • Consider using the Math Games on page 280 or the Challenge in Real Life on page 281 to assess the knowledge and skills of students who have difficulty with tests. |