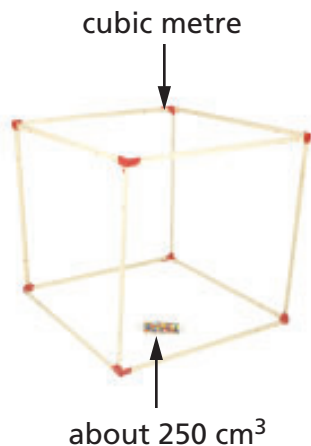# Chapter Review

cubic metre

about 250 cm³

Frequently Asked Questions

Q: **How can you measure volume?**

A: Volume is the amount of space that an object takes up. To measure the volume of an object, count the number of cubes it would take to build the object. For some objects, you can count faster if you count the number of cubes in one layer and the number of layers. Use cubic centimetres to measure small objects. Use cubic metres to measure larger objects.

For example, a stapler might have a volume of about 250 cm³. A room might have a volume of about 35 m³.

Q: **How can you measure capacity?**

A: You can measure capacity in millilitres or litres. 1 mL is the amount that a hollow 1 cm³ cube would hold. 1 L is 1000 mL, or the amount that a cube with 10 cm edges would hold. Use millilitres to measure small capacities. Use litres to measure larger capacities.

For example, a teaspoon holds 5 mL. A large mixing bowl might hold about 5 L.

5 mL   15 mL   125 mL

250 mL   1 L   5 L

Practice

1. Measure the length and thickness of each line.

   a) ───────────

   b) ▬▬▬▬▬▬▬▬▬▬▬

2. What is the missing number in each equation?

   a) 40 cm = ☐ mm

   b) 50 mm = ☐ cm

   c) 50 000 mm = ☐ m

   d) 10 m = ☐ mm

3. Name an object that could have each length.

   a) 50 cm

   b) 12 mm

   c) 3 m

   d) 10 m

4. What unit would you use to measure each?

   a) the width of a nickel

   b) the thickness of a nickel

5. A small greeting card has a perimeter of 40 cm. Draw two different rectangles with this perimeter on 1 cm grid paper.
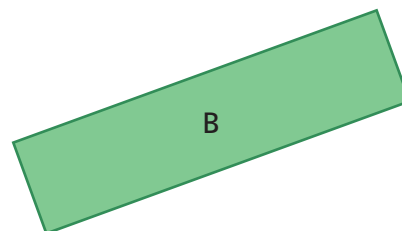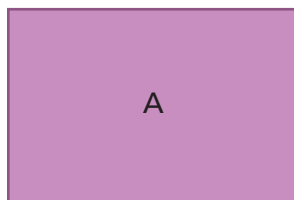
6. A rectangle has an area of 45 cm².

   a) Sketch two different rectangles with this area on 1 cm grid paper.

   b) Which rectangle has the lesser perimeter? How do you know?

7. Rectangles A and B have the same perimeter. Which rectangle has the greater area? How do you know?

A

B

8. When might someone want to figure out the greatest possible area that has a given perimeter?

Lesson 5

9. Use linking cubes to build three different objects with the same volume. Sketch or describe your objects.

Lesson 6

10. What object might have a volume of about 50 cm³?

Lesson 7

11. A room has a volume of 50 m³. Is the room more likely to be a gym or a bedroom? How do you know?

12. a) Estimate the volume of a pencil. Explain how you estimated.
   b) Did you use cubic centimetres or cubic metres to estimate? Why?

Lesson 9

13. a) Is a bathtub likely to hold 180 L, 18 L, or 1800 mL of water?
   b) Is a pitcher likely to hold 2500 L, 250 L, or 2500 mL of juice?

14. Which object below is likely to have each capacity?
   a) 5 mL   **b)** 700 mL   **c)** 15 mL   **d)** 7 L

Lesson 10

15. Use these pails. What different amounts of water could you measure at one time with one, two, or all three full pails? List all the possible combinations.

2 L   3 L   5 L

What Do You Think Now?

Look back at **What Do You Think?** on page 257. How have your answers and explanations changed?