

Chapter 3 | Perimeter and Area Foundations

Worksheet C | Mixed Practice & Application

Name: _____ Grade: _____ Date: _____

Warm-up: Worked Examples

Example 1: Identify the Measurement

Problem: Ribbon will be placed around the outside of a rectangular notice board. Should you find perimeter or area?

Around the outside $\Rightarrow$ perimeter

Example 2: Find the Perimeter of a Rectangle

Problem: A garden bed is 15 m long and 8 m wide. Find its perimeter.

Add all sides $\Rightarrow 15 + 8 + 15 + 8 = 46$

Answer $\Rightarrow 46$ m

Example 3: Find the Area of a Rectangle

Problem: A wall section is 12 m long and 6 m high. Find its area.

Multiply $\Rightarrow 12 \times 6 = 72$

Answer $\Rightarrow 72$ m²

Example 4: Same Rectangle, Two Measurements

Problem: A rectangle is 14 cm by 5 cm. Find both perimeter and area.

Perimeter $\Rightarrow 14 + 5 + 14 + 5 = 38$ cm

Area $\Rightarrow 14 \times 5 = 70$ cm²

Example 5: Perimeter and Area of a Square

Problem: A square has side length 9 m. Find its perimeter and area.

Perimeter $\Rightarrow 4 \times 9 = 36$ m

Area $\Rightarrow 9^2 = 81$ m²

Example 6: Common-Trap Formula Choice

Problem: A rectangle is 10 cm by 3 cm. A student adds all sides and says the area is 26 cm². Explain the mistake.

Wrong (perimeter, not area) $\Rightarrow 10 + 3 + 10 + 3 = 26$ cm

Correct area $\Rightarrow 10 \times 3 = 30$ cm²

Practice

1. A garden is 18 m by 6 m. Find fencing needed.

2. The same garden needs soil. Find area.

3. Explain why Questions 1 and 2 use different units.

4. A poster is 30 cm by 18 cm. Find ribbon length around it.

5. The same poster is covered with paper. Find area.

6. A square patio has side 11 m. Find perimeter and area.

7. A room is 7.5 m by 4 m. Find area.

8. A garden is 16 m by 11 m. Find border length.

9. A square tile has side 25 cm. Find area.

10. A flag is 1.5 m by 0.8 m. Find area.

11. A student says $10 + 4 + 10 + 4 = 28 \text{ cm}^2$ is an area. Explain.

12. A rectangle is 20 cm long and has area 140 cm^2 . Find width.

13. A square has perimeter 36 cm. Find side length.

14. Non-Routine Item 1: Rectangle A is 8 cm by 4 cm. Rectangle B is 9 cm by 3 cm. Find both perimeters and both areas. Explain why same perimeter can give different areas.

15. Non-Routine Item 2: A carpet is 12 m by 5 m. A student adds sides and writes 34 m^2 for the carpet needed. Explain every error and find the correct area.
