

Chapter 5 | Composite 2-D Shapes

Worksheet C | Mixed Practice & Application

Name: _____ Grade: _____ Date: _____

Warm-up: Worked Examples

Example 1: Add Two Rectangles

Problem: An L-shaped display is split into 9 m by 4 m and 6 m by 3 m rectangles.

Two parts

$$36 \text{ m}^2 + 18 \text{ m}^2$$

Answer

$$54 \text{ m}^2$$

Example 2: Subtract a Cut-Out Rectangle

Problem: A floor fits inside a 15 m by 10 m rectangle. A 3 m by 6 m section is missing.

Full minus cut-out

$$150 \text{ m}^2 - 18 \text{ m}^2$$

Answer

$$132 \text{ m}^2$$

Example 3: Find a Missing Side First

Problem: An L-shape has total width 21 cm and a top section 13 cm wide. Find the missing width.

Subtract

$$21 - 13 = 8$$

Answer

$$8 \text{ cm}$$

Example 4: Rectangle and Triangle Together

Problem: A garden has a 14 m by 5 m rectangle and a triangle with base 14 m and height 6 m.

Rectangle + triangle

$$70 \text{ m}^2 + 42 \text{ m}^2$$

Answer

$$112 \text{ m}^2$$

Example 5: Compare Two Correct Splits

Problem: One split has areas 36 cm^2 and 15 cm^2 . Another has 27 cm^2 and 24 cm^2 .

Split 1

$$36 + 15 = 51$$

Split 2

$$27 + 24 = 51$$

Example 6: Common-Trap Cut-Out Error

Problem: A large 18 cm by 9 cm rectangle has a 4 cm by 4 cm square cut out. A student subtracts 4 from both side lengths and multiplies 14×5 . Explain the error.

Wrong (changes outer dimensions)

$$14 \times 5 = 70$$

Correct (subtracts areas)

$$162 - 16 = 146$$

Practice

1. A 30 m by 18 m playground has an 8 m by 5 m sandpit. Find grass area.

2. Two room sections are 9 m by 6 m and 4 m by 3 m. Find total area.

3. A garden has rectangle 15 m by 8 m plus triangle base 15 m, h 4 m. Find total.

4. A 6 m by 5 m corner is cut from 22 m by 14 m patio. Find area.

5. Full width 20 cm; top section 13 cm. Find missing width.

6. An L-floor has areas 48 m^2 and 35 m^2 . Find total.

7. Garden sections have areas 72 m^2 and 30 m^2 . Find total.

8. A 12 m by 8 m pond is removed from 40 m by 25 m park. Find grass area.

9. Why is a cut-out result less than the full rectangle area?

10. Two splits give $45 + 27$ and $36 + 36$. Find total and explain.

11. Main room 11 m by 7 m plus reading area 3 m by 2 m. Find total.

12. Sign 18 cm by 12 cm plus triangle base 18 cm, h 4 cm. Find total.

13. Full side 28 cm; known sections 9 cm and 11 cm. Find remaining.

14. Non-Routine Item 1: Method A adds 54 cm^2 and 30 cm^2 . Method B subtracts 24 cm^2 from 108 cm^2 . Find both totals and explain why they agree.

15. Non-Routine Item 2: A 7 m by 6 m pond is removed from 24 m by 16 m playground. A student adds it. Explain error and find play space.
