

Chapter 5 | Composite 2-D Shapes

Worksheet B | Independent Practice

Name: _____ Grade: _____ Date: _____

Warm-up: Worked Examples

Example 1: Add Two Rectangles

Problem: An L-shaped room is split into 7 m by 5 m and 4 m by 2 m rectangles.

Two parts

$$35 \text{ m}^2 + 8 \text{ m}^2$$

Answer

$$43 \text{ m}^2$$

Example 2: Subtract a Cut-Out Rectangle

Problem: A courtyard fits inside a 16 m by 12 m rectangle. A 5 m by 4 m corner is missing.

Full minus cut-out

$$192 \text{ m}^2 - 20 \text{ m}^2$$

Answer

$$172 \text{ m}^2$$

Example 3: Find a Missing Side First

Problem: An L-shape has total width 19 cm and a top section 11 cm wide. Find the missing width.

Subtract

$$19 - 11 = 8$$

Answer

$$8 \text{ cm}$$

Example 4: Rectangle and Triangle Together

Problem: A shape has a 10 m by 6 m rectangle and a triangle with base 10 m and height 5 m.

Rectangle + triangle

$$60 \text{ m}^2 + 25 \text{ m}^2$$

Answer

$$85 \text{ m}^2$$

Example 5: Compare Two Correct Splits

Problem: One split has areas 28 cm^2 and 20 cm^2 . Another has 18 cm^2 and 30 cm^2 .

Split 1

$$28 + 20 = 48$$

Split 2

$$18 + 30 = 48$$

Example 6: Common-Trap Cut-Out Error

Problem: A large 20 cm by 12 cm rectangle has an 8 cm by 3 cm rectangle cut out. A student adds the areas.

Wrong (adds)

$$240 + 24 = 264$$

Correct (subtracts)

$$240 - 24 = 216$$

Practice

1. Rectangles 7 cm by 3 cm and 4 cm by 2 cm. Find total.

2. Cut 3 cm by 2 cm from 12 cm by 7 cm. Find remaining.

3. Rectangle 13 m by 6 m plus triangle base 13 m, h 4 m. Find total.

4. Rectangles 9 m by 5 m and 6 m by 3 m. Find total.

5. Cut 5 m by 4 m from 16 m by 10 m. Find remaining.

6. Full length 22 cm; one section 14 cm. Find missing.

7. Rectangles 11 cm by 4 cm and 5 cm by 5 cm. Find total.

8. Cut 6 cm by 3 cm from 18 cm by 12 cm. Find remaining.

9. Rectangle area 48 cm^2 and triangle area 21 cm^2 . Find total.

10. Full height 19 m; one part 8 m. Find missing.

11. Included areas 36 cm^2 and 29 cm^2 . Find total.

12. Cut 10 m by 5 m from 25 m by 14 m. Find remaining.

13. Explain why cut-outs are subtracted.

14. Explain why overlaps cannot be counted twice.

15. Cut 24 m^2 flower bed from 180 m^2 patio. Find remaining.
