

# Area of Composite Figures

Lesson 5-5

**Name:** \_\_\_\_\_

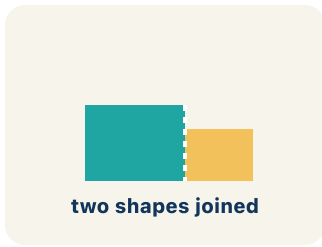
**Date:** \_\_\_\_\_

**Class:** \_\_\_\_\_

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# Key Vocabulary Level 2 Standard

Picture first, then the word, then a plain-language meaning. Say each word out loud.



*An L-shaped room = a  $12 \times 8$  rectangle joined to a  $6 \times 5$  rectangle; total area =  $96 + 30 = 126$  sq ft*

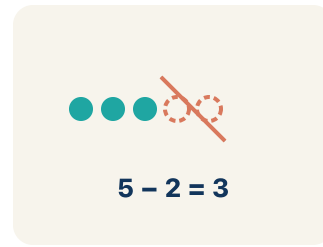
## Composite Figure

Write the definition:

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*Draw a dashed line across the L-shape to split it into two rectangles — now you can find each area separately*

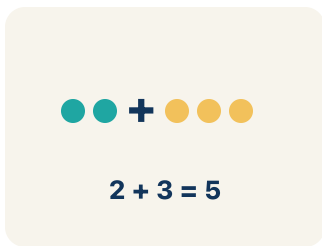
## Decompose

Write the definition:

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*T-shaped hallway: top rectangle = 30 sq ft, bottom rectangle = 28 sq ft → total =  $30 + 28 = 58$  sq ft*

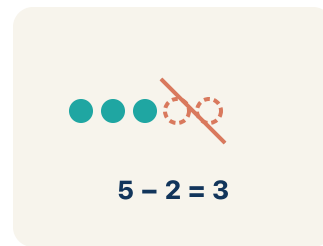
## Add

Write the definition:

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*A  $14 \times 10$  pool with a  $6 \times 4$  cutout:  $140 - 24 = 116$  sq ft of water surface*

## Subtract

Write the definition:

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$$3x + 5$$

no equal sign

*Rectangle:  $A = l \times w$ ; Triangle:  $A = \frac{1}{2} \times b \times h$ ; use  
the right formula for each piece of a composite  
figure*

### **Formula**

**Write the definition:**

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## Guided Notes

Level 2 Standard



### WHAT WE'RE LEARNING TODAY

I can find the area of a composite figure by adding or subtracting the areas of basic shapes.



Fill in each blank as we go. Use the Word Bank to help you.



### WORD BANK — FILL EACH BLANK WITH THE BEST WORD

Composite Figure

Decompose

Add

Subtract

Formula



Tap any word to see what it means and a picture.

1

A shape made of two or more basic shapes combined is a

2

To break a composite figure into basic shapes is to  it.

3

To find the total area of separate parts, I  their areas.

4

To find the area of a shape with a piece removed, I  the missing part's area.

5

A math rule written with symbols is a .



### Watch & Try — Worked Examples

See the notes in action: watch one worked all the way through, then try the next with the same steps.

 **I do – watch**

Follow each step as your teacher solves it.

**Problem:** An L-shaped room is made of two rectangles:  $10\text{ ft} \times 6\text{ ft}$  and  $4\text{ ft} \times 3\text{ ft}$ . What is the total area?

- A. 72 sq ft
- B. 60 sq ft
- C. 12 sq ft
- D. 72 ft

**Step 1** Area 1 =  $10 \times 6 = 60$  sq ft.

**Step 2** Area 2 =  $4 \times 3 = 12$  sq ft.

**Step 3** Total =  $60 + 12 = 72$  sq ft.

 **Answer:** A. 72 sq ft


 **Try – put the steps in order**

Drag the cards (or use the ▲ ▼ buttons) to put the solution steps in the right order, then press **Check**.

Total =  $60 + 12 = 72$  sq ft.

Area 2 =  $4 \times 3 = 12$  sq ft.

Area 1 =  $10 \times 6 = 60$  sq ft.

 **We do – together**

Solve this one with your class using the same steps.

**Problem:** A rectangular patio is  $15\text{ ft} \times 10\text{ ft}$  with a  $5\text{ ft} \times 4\text{ ft}$  rectangular flower bed cut out.  
What is the remaining area?

- A. 130 sq ft
- B. 150 sq ft
- C. 20 sq ft
- D. 170 sq ft

**Step 1**

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**Step 2**


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**Step 3**

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**Answer:**

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 **You do – your turn**

Now try one on your own. Show every step.

**Problem:** Find the area of an L-shape made of a  $5 \times 3$  rectangle and a  $2 \times 4$  rectangle.

- A. 23 sq units
- B. 15 sq units
- C. 8 sq units
- D. 20 sq units

Show your work:

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## Try It

Solve on your own. Check the answer key when you are done.

**1. Plan 2 — L-shaped lobby: decompose the L into two rectangles, one 9 ft by 6 ft and one 7 ft by 3 ft, then ADD. What is the total floor area?**

- A. 75 sq ft
- B. 63 sq ft
- C. 54 sq ft
- D. 21 sq ft

Show your work:

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**2. Plan 4 — Design studio: the floor is a 16 ft by 12 ft rectangle, but a 5 ft by 4 ft storage closet is cut out of one corner. Find the usable floor area.**

- A. 172 sq ft
- B. 192 sq ft
- C. 212 sq ft
- D. 20 sq ft

Show your work:

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## Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

**A T-shaped room can be decomposed in two different ways. Show both ways and prove they give the same total area. Use a T-shape where the top is  $14\text{ ft} \times 4\text{ ft}$  and the stem is  $6\text{ ft} \times 10\text{ ft}$ .**

*Sentence starter: Way 1: I split it into \_\_\_ and \_\_\_. Areas: \_\_\_ + \_\_\_ = \_\_\_. Way 2: I used a \_\_\_ rectangle and subtracted \_\_\_. Areas: \_\_\_ - \_\_\_ = \_\_\_. Both give \_\_\_ sq ft.*

Show your work:

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## Reflect — Exit Ticket

**A composite figure is made of a  $9\text{ ft} \times 7\text{ ft}$  rectangle and a  $3\text{ ft} \times 4\text{ ft}$  rectangle joined together. What is the total area?**

- A. 75 sq ft
- B. 63 sq ft
- C. 12 sq ft
- D. 75 ft

Your answer:

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