Name_____ Date_____ Period_____

LESSON 5-3 · SESSION 2 · PREREQUISITE PRACTICE B · SKILL 1 OF 2

Decompose Trapezoids

Builds on Lesson 5-3 Session 1 · 6.G.A.1

TODAY'S LESSON	The formula gives the same area as cutting a trapezoid into a rectangle and two triangles.
YOU NEED TO	Find a trapezoid's area by cutting it into a rectangle and triangles. **You will use it in Practice Form A, problems 3 and 7.**

STEPS TO FOLLOW

use these same steps on every problem

1. Find the **rectangle**: short base × height.
2. Find the **triangles**: (long − short) × height ÷ 2.
3. **Add** the two areas.

WATCH ME

the steps in action

A trapezoid has bases 10 ft and 18 ft and height 6 ft. Find its area.

Step 1 10 × 6 = 60.

Step 2 (18 − 10) × 6 ÷ 2 = 24.

Step 3 60 + 24 = 84.

Answer **84 ft²**

TRY IT WITH HELP

fill in each step

1. A trapezoid has bases 8 m and 12 m and height 5 m. Find its area.

Step 1 8 × 5 = _____

Step 2 (12 − 8) × 5 ÷ 2 = _____

Step 3 40 + 10 = _____ m²

2. A trapezoid has bases 6 in and 14 in and height 4 in. Find its area.

Step 1 6 × 4 = _____

Step 2 (14 − 6) × 4 ÷ 2 = _____

Step 3 24 + 16 = _____ in²

YOUR TURN

use the steps on your own

3. Cut each trapezoid apart. Find its area.

a. bases 4 and 10, h = 3 _____

b. bases 5 and 9, h = 6 _____

c. bases 10 and 16, h = 4 _____

d. bases 7 and 15, h = 2 _____

Find a Missing Dimension

Builds on Lesson 5-2 Session 2 · 6.G.A.1

TODAY'S LESSON	A trapezoid has an area of 84 m² and a height of 7 m. You work backward to find a base.
YOU NEED TO	Work backward from an area: double it, divide by the height, then subtract. **You will use it in Practice Form A, problem 8.**

STEPS TO FOLLOW

use these same steps on every problem

1. **Double** the area.
2. **Divide** by the height. That is the sum of the bases.
3. **Subtract** the base you know.

WATCH ME

the steps in action

A trapezoid has area 60 cm² and height 5 cm. One base is 4 cm. Find the other base.

Step 1 60 × 2 = 120.

Step 2 120 ÷ 5 = 24.

Step 3 24 − 4 = 20.

Answer **20 cm**

TRY IT WITH HELP

fill in each step

4. A trapezoid has area 40 m² and height 4 m. One base is 7 m. Find the other base.

Step 1 40 × 2 = _____

Step 2 80 ÷ 4 = _____

Step 3 20 − 7 = _____ m

5. A trapezoid has area 90 ft² and height 10 ft. One base is 8 ft. Find the other base.

Step 1 90 × 2 = _____

Step 2 180 ÷ 10 = _____

Step 3 18 − 8 = _____ ft

YOUR TURN

use the steps on your own

6. Find the other base.

a. A = 36, h = 4, one base 5 _____

b. A = 50, h = 5, one base 6 _____

c. A = 70, h = 7, one base 9 _____

d. A = 24, h = 3, one base 10 _____

READY CHECK

a problem like the one in today's lesson

7. A trapezoid has an area of 48 m² and a height of 6 m. What is the sum of its bases?

A 8 m **B** 16 m **C** 42 m **D** 288 m

CHECK YOURSELF ☐ I can do this on my own ☐ I need a little help ☐ I have a question about #____