UNIT 5 · STANDARD 6.G.1

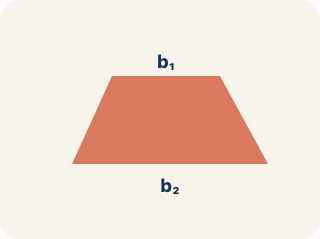
Area of Trapezoids

Lesson 5-2

Name: Type your name **Date:** Today's date **Class:** Class period

Key Vocabulary Level 2 Standard

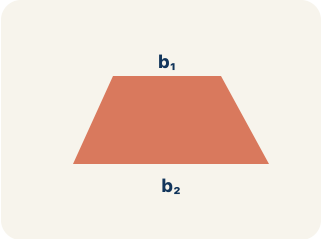
Picture first, then the word, then a plain-language meaning. Say each word out loud.



A table top wider than the bottom shelf — the top and bottom edges are parallel, the two sides slant inward

Trapezoid

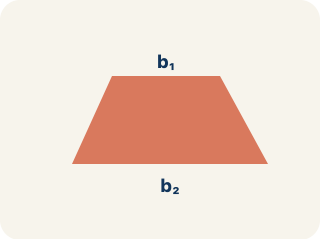
Write the definition:



If the bottom of the trapezoid is 10 ft, then b1 = 10 ft in the formula A = ½(b1 + b2) × h

Base 1 (b1)

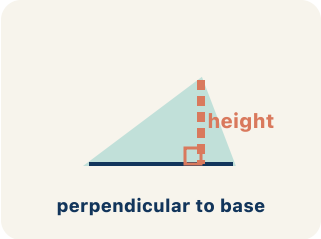
Write the definition:



If the top of the trapezoid is 6 ft, then b2 = 6 ft; both bases are parallel to each other

Base 2 (b2)

Write the definition:



A dashed vertical line from the top base straight down to the bottom base at a 90° angle — NOT the slanted side

Height

Write the definition:

Area = 15 square units

A trapezoid with $b_1 = 10$, $b_2 = 6$, $h = 4$ has area = $\frac{1}{2}(10 + 6) \times 4 = 32$ sq units

Area

Write the definition:

Guided Notes Level 2 Standard

🎯 **WHAT WE'RE LEARNING TODAY**

I can find the area of a trapezoid using the formula A = ½(b1 + b2) × h.

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

📚 **WORD BANK — FILL EACH BLANK WITH THE BEST WORD**

Trapezoid | Base 1 (b1) | Base 2 (b2) | Height | Area

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

1. A quadrilateral with exactly one pair of parallel sides is a _____.

2. One of the two parallel sides of a trapezoid is _____.

3. The other parallel side of a trapezoid is _____.

4. The perpendicular distance between the two parallel bases is the _____.

5. The amount of flat space inside the trapezoid is its _____.

🧱 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: What is the area of a trapezoid with bases 6 cm and 10 cm, and height 4 cm?

A. 32 sq cm

B. 64 sq cm

C. 24 sq cm

D. 40 sq cm

Step 1 $A = \frac{1}{2} \times (b_1 + b_2) \times h = \frac{1}{2} \times (6 + 10) \times 4 = \frac{1}{2} \times 16 \times 4 = 32$ sq cm.

✅ **Answer:** A. 32 sq cm

🤝 We do — together

Solve this one with your class using the same steps.

Problem: A trapezoid has an area of 45 sq ft, bases of 7 ft and 11 ft. What is the height?

A. 5 ft

B. 9 ft

C. 3 ft

D. 10 ft

Step 1 _____

Step 2 _____

Answer: _____

✏️ **You do — your turn**

Now try one on your own. Show every step.

Problem: What is the first step when finding the area of a trapezoid?

A. Add the two bases together

B. Multiply the two bases

C. Subtract the shorter base from the longer base

D. Divide the height by 2

Show your work:

Try It

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

1. Blueprint 2: A trapezoidal skylight has bases of 9 ft and 7 ft and a height of 6 ft. What is its area?

A. 48 sq ft

B. 96 sq ft

C. 63 sq ft

D. 44 sq ft

Show your work:

2. Level 2 Extension: Two copies of a trapezoidal window (bases 5 ft and 11 ft) are flipped and joined to make a parallelogram with height 6 ft. The parallelogram's base is 5 + 11 = 16 ft, so its area is 96 sq ft. What is the area of ONE trapezoid window?

A. 48 sq ft

B. 96 sq ft

C. 16 sq ft

D. 192 sq ft

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A trapezoid and a parallelogram both have a height of 8 ft. The trapezoid has bases of 5 ft and 11 ft. The parallelogram has a base of 8 ft. Which shape has the greater area? Explain your reasoning using the formulas.

Sentence starter: The trapezoid's area is ____ because ½ × (____ + ____) × ____ = ____. The parallelogram's area is ____ because ____ × ____ = ____. The ____ has a greater area by ____ sq ft.

Show your work:

Reflect — Exit Ticket

A trapezoid has bases of 9 inches and 5 inches, and a height of 6 inches. What is its area?

A. 42 sq in

B. 84 sq in

C. 27 sq in

D. 42 in

Your answer: