Name_____ Date_____ Period_____

LESSON 5-3 · SESSION 2 · PRACTICE · FORM B

The Trapezoid Area Formula

Learning target – I can find the area of a trapezoid using the trapezoid area formula. · 6.G.A.1

REMEMBER

- **A = ½ × (b1 + b2) × h**. The bases b1 and b2 are the two **parallel** sides.
- **Add** the bases first, multiply by the height, then take **half**. Slanted sides are not used.
- Missing base: double the area, divide by the height, then subtract the base you know.

WORKED EXAMPLE

Bases 6 m and 12 m, height 4 m.

Step 1 Add the bases: 6 + 12 = 18.

Step 2 Multiply by the height: 18 × 4 = 72.

Step 3 Take half: 72 ÷ 2 = 36.

Answer **A = 36 m²**

WORDS **base** *(base)* · **formula** *(fórmula)* · **right trapezoid** *(trapecio rectángulo)*

PRACTICE

show your work · label units

1. Find the area of each trapezoid with bases b1 and b2 and height h.

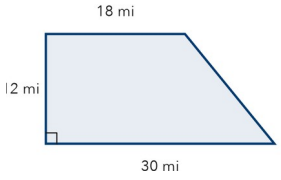
a. 7 cm, 13 cm; h = 6 cm ____ cm²

b. 14 in, 22 in; h = 10 in ____ in²

c. 18 ft, 26 ft; h = 5 ft ____ ft²

d. 4 m, 12 m; h = 9 m ____ m²

2. **County Land.** A county is shaped like this right trapezoid.

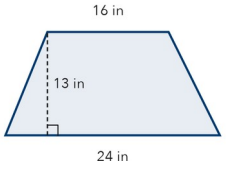


a. Sum of the bases _____ mi

b. Area of the county _____ mi²

c. Two copies make a rectangle. How long is it? _____ mi

3. **Table Runner.** A table runner has the trapezoid shape shown. Find its area.



Show your work.

Answer_____ in²

4. Sidewalk Panel. A sidewalk panel is a trapezoid with parallel sides 6 m and 18 m and a height of 9 m. Find its area.

Show your work.

Answer_____ m²

5. Marcus's Answer. A trapezoid has bases 13 cm and 19 cm and a height of 15 cm. Marcus says its area is 480 cm². Is Marcus right?

Hint *Check each step of the formula. Was a step skipped?*

Show your work.

Answer_____ cm²

6. Pool Cover. Bases 18 ft and 26 ft, height 10 ft. Fabric costs $3 per ft². Find the area and cost.

Hint *Find the area first. Then multiply by the price.*

Show your work.

Area, cost_____

7. Two Signs. Sign M has bases 8 cm and 28 cm. Sign N has bases 12 cm and 24 cm. Both are 7 cm tall. Find each area. What do you notice?

Hint *Compare the sums of the bases.*

Show your work.

Notice_____

8. Missing Base. A trapezoid has an area of 90 m² and a height of 6 m. One base is 11 m.

Hint *Double the area, then divide by the height.*

a. What is the sum of the two bases? _____ m

b. Find the other base. _____ m

Show your work.

FIND THE ERROR

explain the mistake, then fix it

9. Andre's Work. A trapezoid has bases 9 m and 15 m and a height of 6 m. Andre wrote: "A = ½ × 9 × 6 = 27 m²." Explain the mistake and find the correct area.

TEST PRACTICE

choose the best answer

10. A trapezoid has bases 4 in and 12 in and a height of 7 in. Its area is –

A 112 in² **B** 168 in² **C** 23 in² **D** 56 in²

11. The trapezoid formula uses the average of the –

A two bases **B** two slanted sides

C height and one base **D** four sides

SELF-CHECK CODE

find your answer · copy its letter into that problem's box · spell a math word

288	126	260	240	660	520	480	108	19	216
A	G	V	R	A	Z	Q	E	E	X

#2b	#3	#4	#5	#6	#7	#8b

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