Name_____ Date_____ Period_____

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

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.

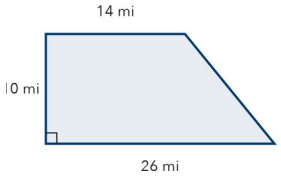
a. 9 cm, 15 cm; h = 8 cm ____ cm²

b. 20 in, 28 in; h = 15 in ____ in²

c. 12 ft, 18 ft; h = 4 ft ____ ft²

d. 6 m, 10 m; h = 5 m ____ m²

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

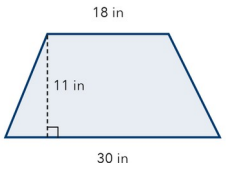


a. Sum of the bases _____ mi

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 8 m and 20 m and a height of 7 m. Find its area.

Show your work.

Answer_____ m²

5. Talia's Answer. A trapezoid has bases 11 cm and 17 cm and a height of 20 cm. Talia says its area is 560 cm². Is Talia right?

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

Show your work.

Answer_____ cm²

6. Pool Cover. Bases 16 ft and 22 ft, height 10 ft. Fabric costs $2 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 10 cm and 26 cm. Sign N has bases 14 cm and 22 cm. Both are 8 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 84 m² and a height of 7 m. One base is 10 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. Sofia's Work. A trapezoid has bases 7 m and 21 m and a height of 5 m. Sofia wrote: "A = ½ × 7 × 5 = 17.5 m²." Explain the mistake and find the correct area.

TEST PRACTICE

choose the best answer

10. A trapezoid has bases 5 cm and 11 cm and a height of 6 cm. Its area is –

A 22 cm² **B** 48 cm² **C** 96 cm² **D** 165 cm²

11. In A = ½ × (b1 + b2) × h, the first step is to –

A multiply b1 by h **B** divide by 2

C add the bases **D** multiply the bases

SELF-CHECK CODE

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

14	144	98	200	196	280	560	380	528	264
A	L	R	F	X	M	Q	U	Z	O

#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 #___