

Lesson 5-3 • Apply Day

Reinforce Understanding

The Trapezoid Area Formula

I can find the area of a trapezoid using the formula $A = \frac{1}{2}(b_1 + b_2) \times h$.

Worked model

A trapezoid has parallel bases of 9 cm and 15 cm and a height of 8 cm. Find the area.

1. Name the parts. $b_1 = 9$ cm $b_2 = 15$ cm $h = 8$ cm
2. Write the formula. $A = \frac{1}{2} \times (b_1 + b_2) \times h$
3. Add the two bases first. $9 + 15 = 24$
4. Multiply, then halve. $24 \times 8 = 192$, and half of 192 is 96

Answer: The area of the trapezoid is 96 square centimeters (96 cm^2).

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. (Lesson 5.1) Find the area of a new parallelogram with base 5 and perpendicular height 3.

Complete each step, then write the final answer.

1. Use the perpendicular height: ____.
2. $\text{Area} = 5 \times 3 =$ ____.

Answer: _____

2. (Lesson 5.1) Find the area of a new parallelogram with base 6 and perpendicular height 5.

Complete each step, then write the final answer.

1. Use the perpendicular height: ____.
2. $\text{Area} = 6 \times 5 =$ ____.

Answer: _____

3. (Lesson 5.1) Find the area of a new parallelogram with base 7 and perpendicular height 7.

Complete each step, then write the final answer.

1. Use the perpendicular height: ____.
2. $\text{Area} = 7 \times 7 =$ ____.

Answer: _____