

Lesson 5-2

Reinforce Understanding

Determine the Area of Triangles

I can find the area of a triangle using the formula $A = \frac{1}{2} \times \text{base} \times \text{height}$.

Worked model

A triangle has a base of 16 cm and a perpendicular height of 9 cm. Find the area.

1. Two copies of a triangle form a parallelogram, so a triangle is half of one.
2. Write the formula. $A = \frac{1}{2} \times b \times h$
3. Name the parts. $b = 16$ cm $h = 9$ cm, meeting the base at a square corner
4. Multiply, then halve. $16 \times 9 = 144$, and half of 144 is 72

Answer: The area of the triangle is 72 square centimeters (72 cm^2).

Practice

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

1. Use the formula $A = \frac{1}{2} \times b \times h$ to find the area of each triangle.

Complete the table. Show how you found each value.

Triangle	Base	Height	Area
Sail A	6 ft	8 ft	
Sail B	10 ft	5 ft	

Show your work

2. What is the area of a triangle with base 10 cm and height 6 cm?

Circle the letter of the best answer. Show how you know.

- A. 16 sq cm
- B. 30 sq cm
- C. 30 cm
- D. 60 sq cm

3. A triangle has an area of 24 sq ft and a base of 8 ft. What is the height?

Circle the letter of the best answer. Show how you know.

- A. 3 ft
- B. 6 ft
- C. 12 ft
- D. 16 ft