

Reteaching 7-1

Areas of Parallelograms and Triangles

OBJECTIVE: Finding areas of triangles and parallelograms

MATERIALS: Graph paper

Example

A triangle has an area of 18 in.^2 . The length of its base is 6 in. Find its corresponding height.

Draw a sketch. Then substitute into the area formula, and solve for h .

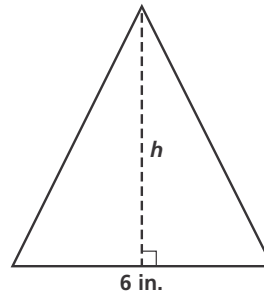
$$A = \frac{1}{2}bh$$

$$18 = \frac{1}{2}(6)h \quad \text{Substitute.}$$

$$18 = 3h \quad \text{Simplify.}$$

$$h = 6$$

The height of the triangle is 6 in.



Exercises

Complete each exercise.

- Use graph paper. Draw an obtuse, an acute, and a right triangle, each with an area of 12 square units. Label the base and height of each triangle.
- Draw a different obtuse, acute, and right triangle, each with an area of 12 square units. Label the base and height of each triangle.
- A triangle has height 5 cm and base length 8 cm. Find its area.
- A triangle has height 11 in. and base length 10 in. Find its area.
- A triangle has area 24 m^2 and base length 8 m. Find its height.
- A triangle has area 16 ft^2 and height 4 ft. Find its base.
- A triangle has area 8 in.^2 . The lengths of the base and the height are equal. Find the length of its base.
- On graph paper draw three parallelograms, each with an area of 24 square units. Label the base and height of each parallelogram.
- A parallelogram has area 35 in.^2 and height 7 in. Find its base.
- A parallelogram has area 391 cm^2 and base 17 cm. Find its height.
- A parallelogram has area 81 ft^2 . The lengths of the base and the height are equal. Find the length of its base.