# SKILL 8: Area of Rectangles and Squares

The **area** of a figure is the amount of surface it covers. Area is usually measured by the number of unit squares of the same size that fit into the figure. If a figure is labeled with inches, then the area is expressed in **square inches (in²)**. A square inch is a square whose sides measure one inch. A **square centimeter (cm²)** is a square whose sides measure one centimeter.

The **base** of a square or rectangle is the distance across the bottom. The **height** is the distance up a side. The area of any square or rectangle is equal to the base times the height.
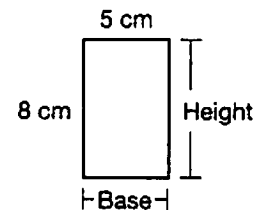
## Example

**Find the area of the rectangle.**

Each side is measured in centimeters, so the area will be measured in square centimeters (cm²).

Find the area by multiplying base and height.
5 cm × 8 cm = 40 cm²

The area of the rectangle is 40 square centimeters.

## Guided Practice

**Find the area of each rectangle.**

**1.**   10 mi, 6 mi, 6 mi, 10 mi

a. What is the base? _____

b. What is the height? _____

c. Multiply base and height to find the area. _____

**2.**   9 m, 4 m, 4 m, 9 m   _____

**3.**   25 in., 4 in.   _____

**4.**   3 yd, 7 yd, 7 yd, 3 yd   _____

**5.**   6 cm, 3 cm   _____

**6.**   200 in., 200 in.   _____

**7.**   5 cm, 4 cm   _____

# SKILL 8: Practice

**Find the missing measurement for each rectangle.**

**1.** Area = _____    **2.** Area = 24 cm$^2$    **3.** Area = 84 in$^2$

Base = 7 ft    Base = _____    Base = 7 in.

Height = 9 ft    Height = 6 cm    Height = _____

**4.** Area = 11.5 m$^2$    **5.** Area = _____    **6.** Area = 12.46 cm$^2$

Base = 5 m    Base = 5.875 in.    Base = _____

Height = _____    Height = 4 in.    Height = 7 cm

**Find the area of each figure.**

**7.** Square with sides of length 8 ft    _____

**8.** Rectangle with sides 4.7 m and 7.3 m    _____

**9.** Square with sides of length 21 cm    _____

**10.** Rectangle with sides 8.3 m and 5.2 m    _____

**11.** Rectangle with sides 9 in. and 4 in.    _____

**Solve.**

**12.** Shelly plans to paint a wall in her bedroom. The wall is 11 ft long and 8 ft high. She needs enough paint to cover how much area?    _____

**13.** The Food Bank for Monterey County (California) set a record by baking a lasagne with an area of 490 ft$^2$. If the lasagne was 70 ft long, how wide was it?    _____

**TEST PREP**

**14.** A map of the Yellowstone area showed an area 60 mi by 60 mi. How many square miles were shown on the map?

*Skill 8*

**A** 120 mi$^2$    **C** 360 mi$^2$

**B** 240 mi$^2$    **D** 3,600 mi$^2$

**15.** The length of a box is 18 cm. How many meters long is the box?

*Skill 1*

**F** 0.18 m    **H** 180 m

**G** 1.8 m    **J** 1,800 m