

Chapter 14: Relate Multiplication and Area

Dear Family,

During the next few weeks, our math class will be learning about area of figures.

You can expect to see homework that provides practice with finding area by counting squares, using addition, or using multiplication.

**(Area=Length x Width)**

**Vocabulary**

- **Area:** The measure of the number of unit squares needed to cover a surface.
- **Square inch:** A square inch is the area of a unit square.
- **Square unit:** A unit used to measure area, such as square foot, square meter, and so on.
- **Unit square:** A square with a side length of 1 unit, used to measure area.

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- **Homework due date: Sunday, Feb. 22<sup>nd</sup>**
  - Students will complete a **test on both Perimeter and Area** next **Thursday, February 26.**
  - This week's homework will be completed on IXL. Please use the attached packet to review the definitions and examples on finding the area of rectangles.
  - **Feel free to contact me with any questions at [diana.charaf@archimedean.org](mailto:diana.charaf@archimedean.org)**
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**Complete homework daily based on the schedule provided below:**

**Monday 02/16**

**Tuesday 02/17**

**Wednesday 02/18**

**Thursday 02/19**

**Friday 02/20**

**No Homework**

IXL Lessons: **8KJ** and **X66**

IXL Lesson: **5HA**

IXL Lesson: **DGM**

IXL Lesson: **SGP**

# Area of rectangles

## What is area?

Area is the amount of space taken up by a two-dimensional shape. You can measure the area of a shape by counting how many **unit squares** fit within it. A unit square has an area of one square unit.

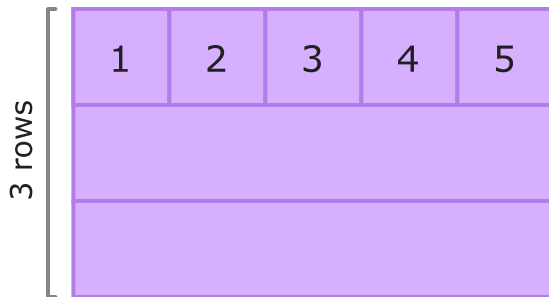
1	2	3	4	5
6	7	8	9	10
11	12	13	14	15

This rectangle is covered by 15 unit squares.

So, the area of the rectangle is 15 square units.

## Finding area by multiplying

You can also find the area of a rectangle by multiplying.



Each row has 5 unit squares. There are 3 rows of unit squares.

So, you can multiply  $5 \times 3$  to find the area of the rectangle.

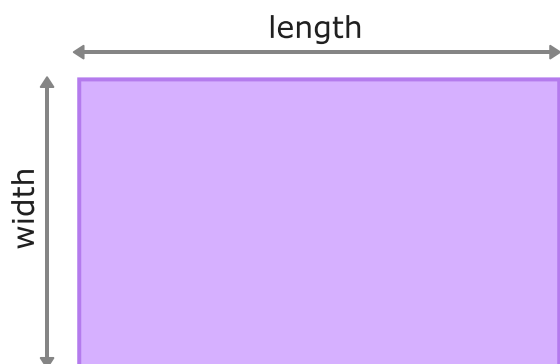
$$5 \times 3 = 15$$

The area of the rectangle is 15 square units.

## Area formula

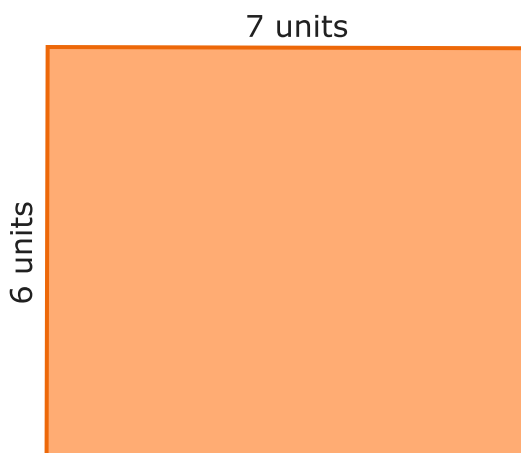
You can find the area of any rectangle by multiplying the length times the width.

$$\text{Area} = \text{length} \times \text{width}$$



Let's try it!

The length of this rectangle is 7 units. The width of this rectangle is 6 units.



Multiply the length by the width.

$$7 \times 6 = 42$$

So, the area of the rectangle is 42 square units.

# Area of compound shapes

A **compound shape** is made up of basic shapes put together. You may also hear it called a "composite" or "complex" shape.

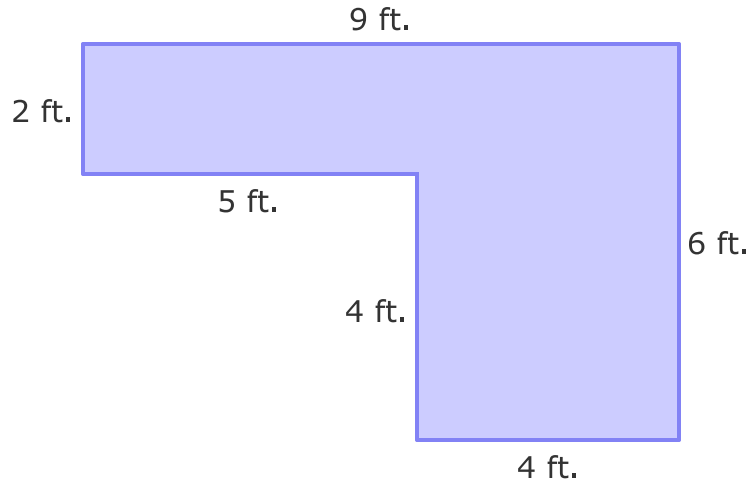
How can you find the area of a compound shape? Break it up into pieces!

To find the area of a compound shape, follow these steps:

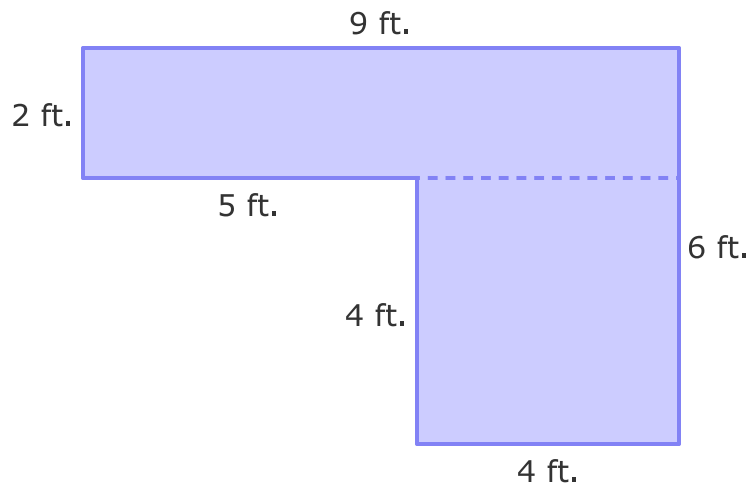
1. Break the compound shape into basic shapes.
2. Find the area of each basic shape.
3. Add the areas.

## Compound shapes made of rectangles

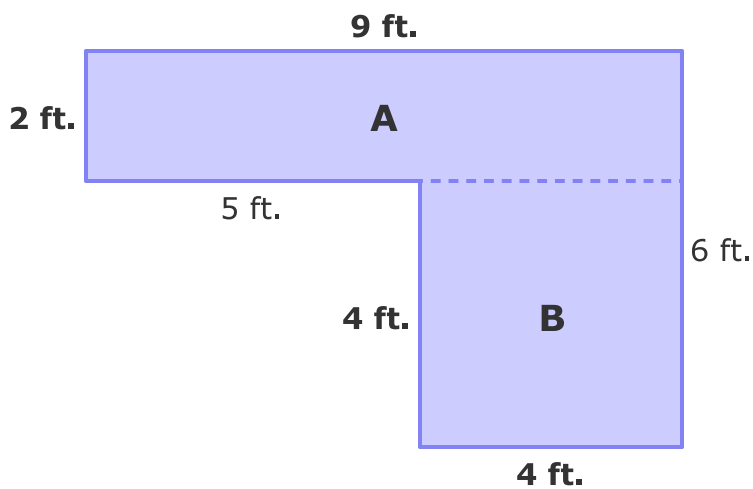
This compound shape is made of two rectangles. Let's follow the steps to find its area!



First, draw a line to break the compound shape into basic shapes. There is more than one way to do this! Here is one way.



Then, find the [area of each rectangle](#) by multiplying **length × width**.



Rectangle A:

$$2 \times 9 = 18$$

The area of rectangle A is **18 square feet**.

Rectangle B:

$$4 \times 4 = 16$$

The area of rectangle B is **16 square feet**.

Now, add the areas of the basic shapes.

$$18 + 16 = 34$$

So, the area of the compound shape is **34 square feet!**