Grade 6  
Unit 1Lesson 4CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

Unit 1, Lesson 4

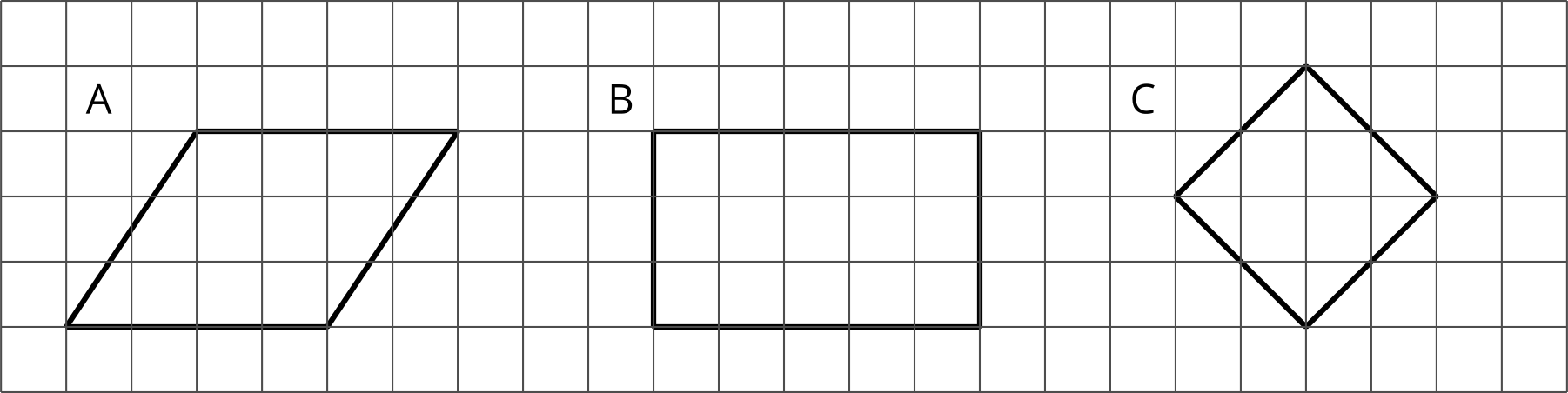
# Parallelograms

Let’s investigate the characteristics and area of parallelograms.

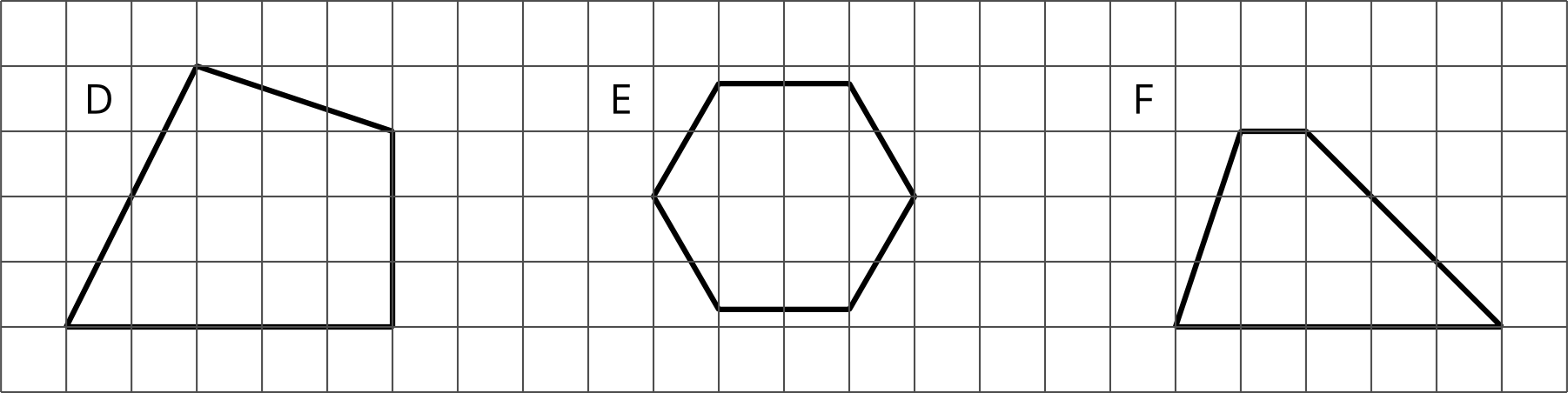
Grade 6  
Unit 1Lesson 4CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

## 4.1What Are Parallelograms?

Figures A, B, and C are *parallelograms*.



Figures D, E, and F are not parallelograms.



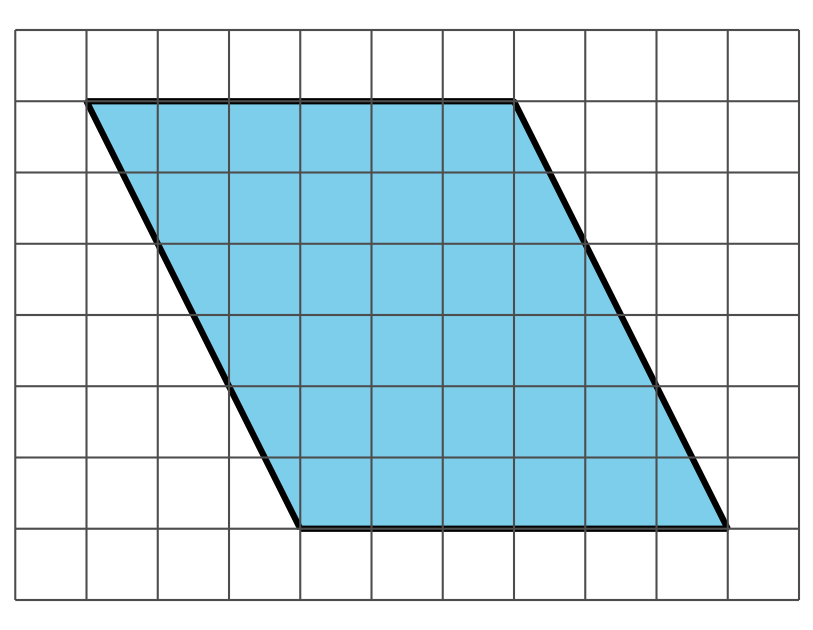
What do you notice about:

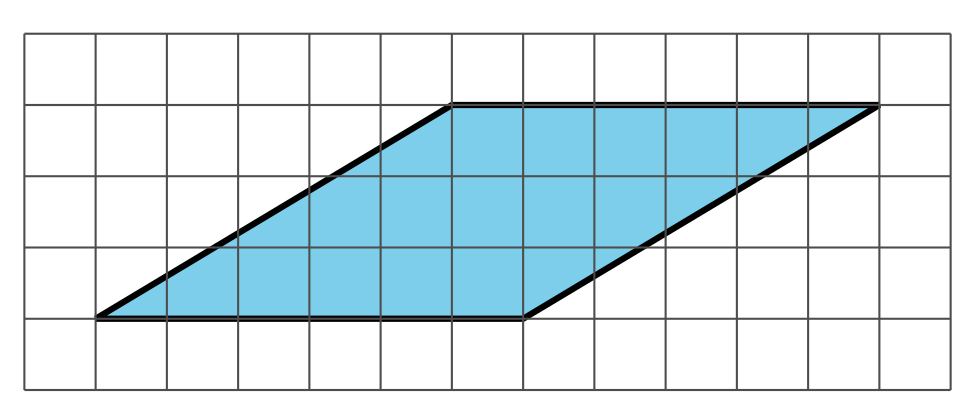
1. The number of sides that a parallelogram has?
2. Opposite sides of a parallelogram?
3. Opposite angles of a parallelogram?

Grade 6  
Unit 1Lesson 4CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

## 4.2Area of a Parallelogram

Find the area of each parallelogram. Show your reasoning.

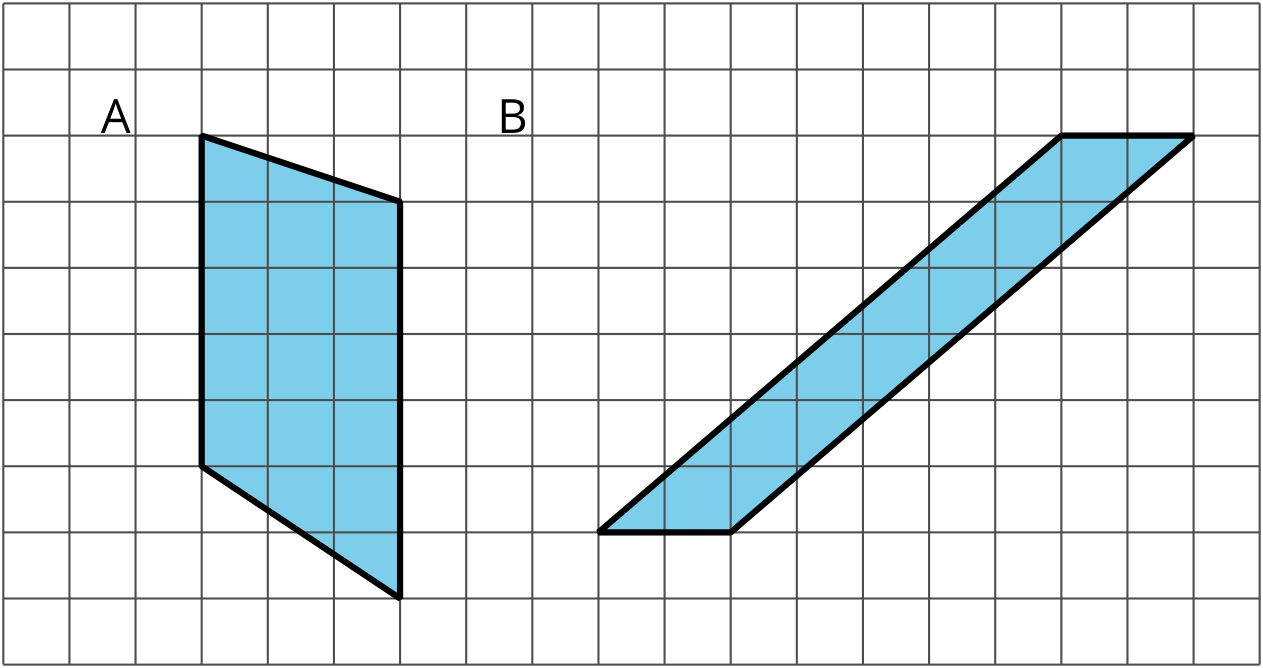
1.

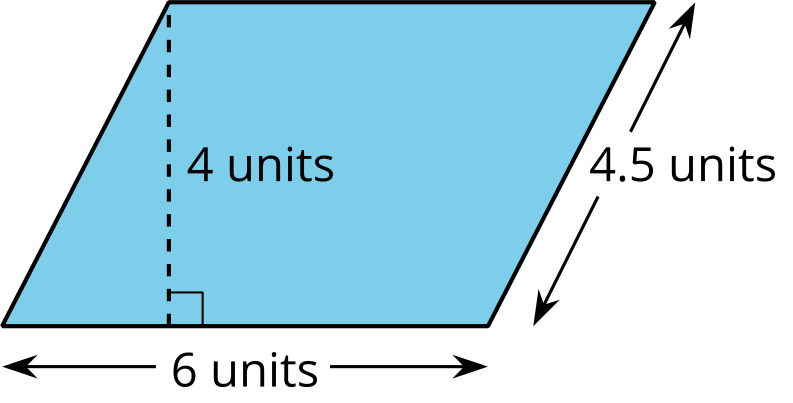
2.

Grade 6  
Unit 1Lesson 4CC BY NC Illustrative Mathematics, based on IM 6–8 Math, CC BY Open Up Resources.

## 4.3Lots of Parallelograms

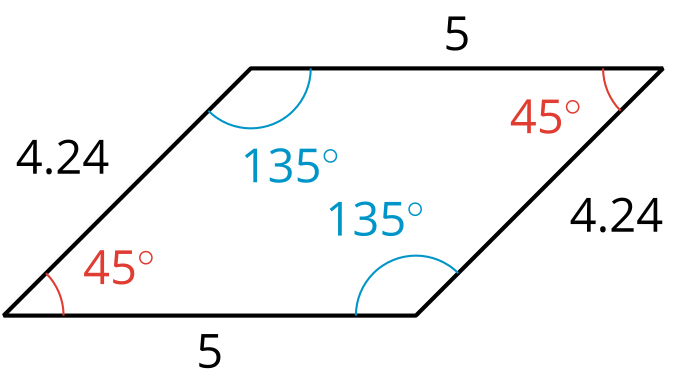
Find the area of each parallelogram. Show your reasoning.



C

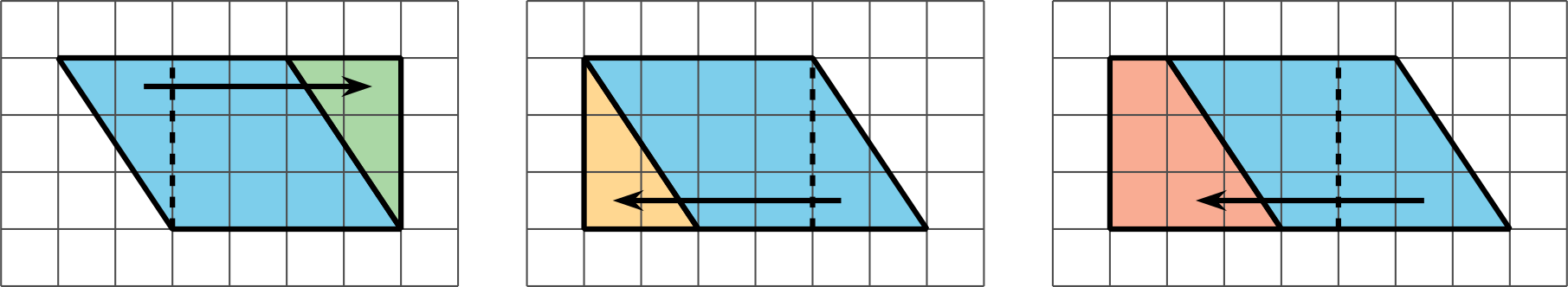
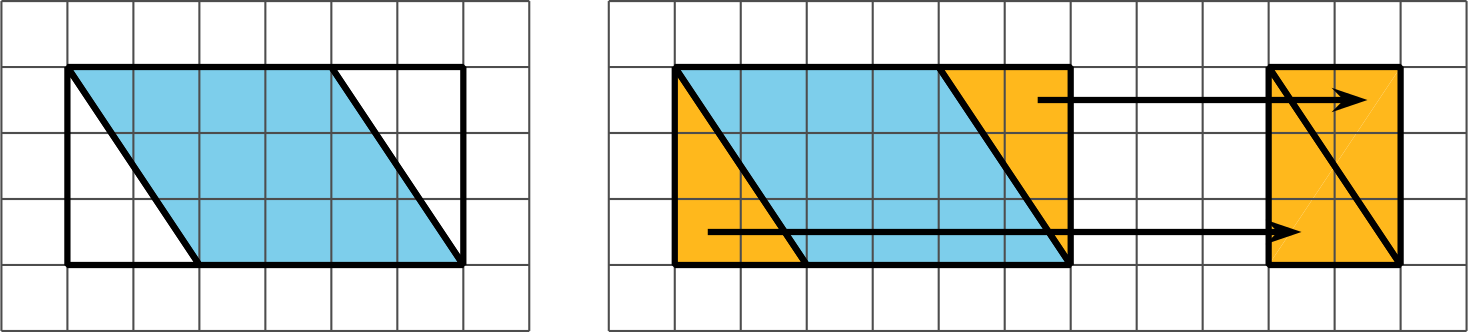
## Lesson 4 Summary

A *parallelogram* is a quadrilateral (it has four sides). The opposite sides of a parallelogram are parallel. The opposite sides of a parallelogram have the same length, and the opposite angles of a parallelogram have the same measure in degrees.





There are several strategies for finding the area of a parallelogram.

* We can decompose and rearrange a parallelogram to form a rectangle. Here are three ways:
* 
* We can enclose the parallelogram and then subtract the area of the two triangles in the corner.
* 

Both of these ways will work for any parallelogram. However, for some parallelograms the process of decomposing and rearranging requires a lot more steps than if we enclose the parallelogram with a rectangle and subtract the combined area of the two triangles in the corners.

