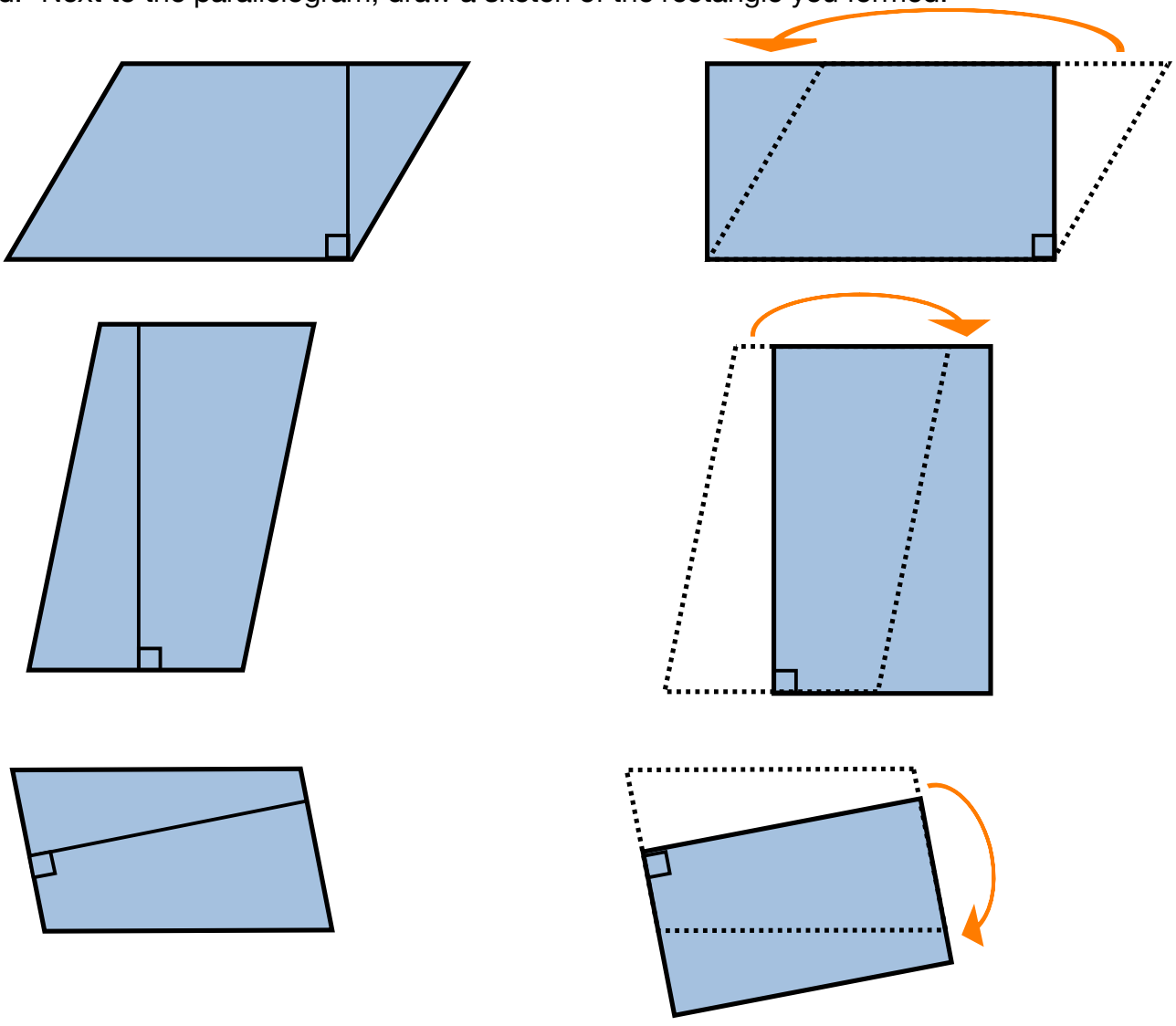
PROBLEM SOLVED
MAKING SENSE OF MATHEMATICS

Area of a Parallelogram
Use What You've Learned
Answers and Explanations

1. Complete the following steps for each parallelogram shown below.
   a. Trace and cut out the parallelogram.
   b. Cut the parallelogram along the height so there are two pieces.
   c. Place the two pieces together to form a rectangle.
   d. Next to the parallelogram, draw a sketch of the rectangle you formed.

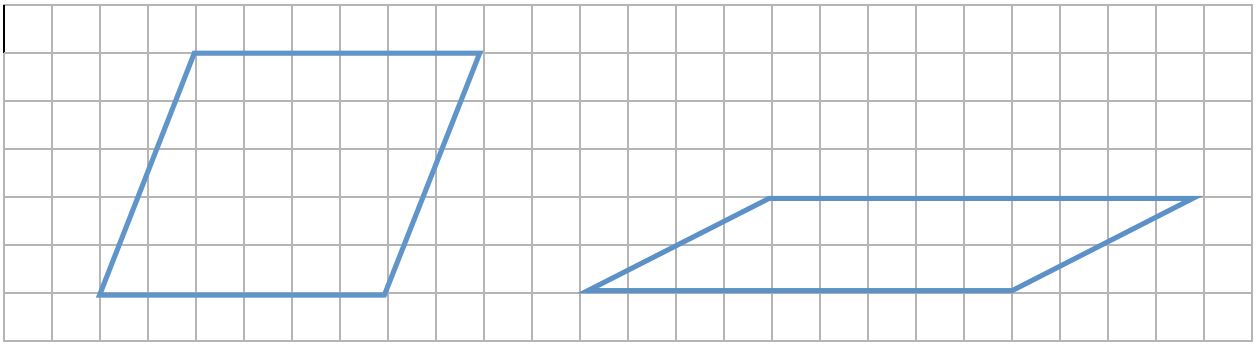


2. Compare each parallelogram to the rectangle you formed. Are the following measurements the same or different?
   a. base
   b. height
   c. area
   d. perimeter

In each case, the base and height are the same. Therefore, the parallelogram and rectangle have the same area. While the bases are the same, the other two sides of the rectangle are shorter than the remaining two sides of the corresponding parallelogram. Therefore, the perimeters of the rectangles are less than the perimeters of the parallelograms.

MakingSense

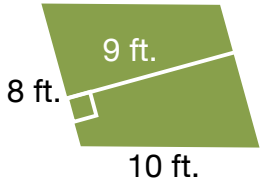
3. Determine the area of each parallelogram by counting the squares. Then find the area by using the formula A = bh. How do your answers compare?



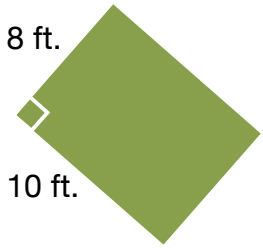
About 30 squares
A = 6 • 5
= 30 square units

About 18 squares
A = 9 • 2
= 18 square units

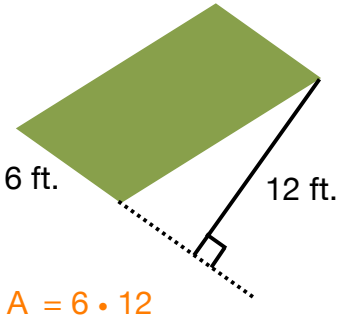
4. Mia is reseeding her lawn. There are three sections of lawn that are shaped like a parallelogram. Find the area of each section.



A = 8 • 9
= 72 sq. ft.

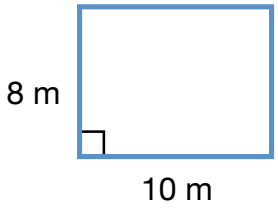


A = 10 • 8
= 80 sq. ft.

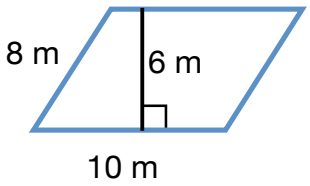


A = 6 • 12
= 72 sq. ft.

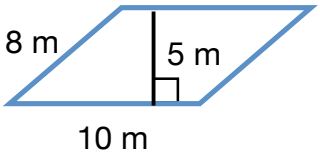
5. Find the perimeter and area of each of the following parallelograms.



P = 8 + 10 + 8 + 10
= 36 m
A = 10 • 8
= 80 sq. m



P = 8 + 10 + 8 + 10
= 36 m
A = 10 • 6
= 60 sq. m



P = 8 + 10 + 8 + 10
= 36 m
A = 10 • 5
= 50 sq. m