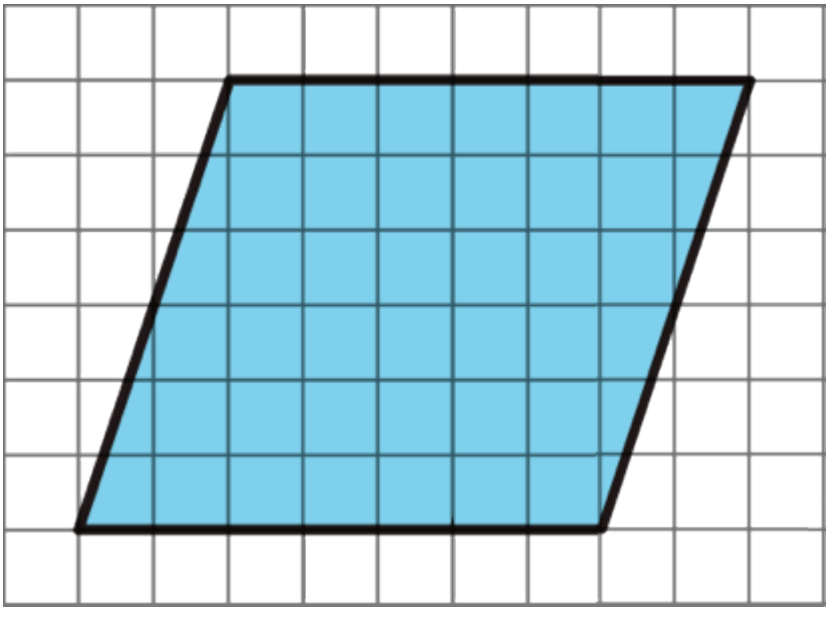
Unit 1 Lesson 5: Areas of Parallelograms

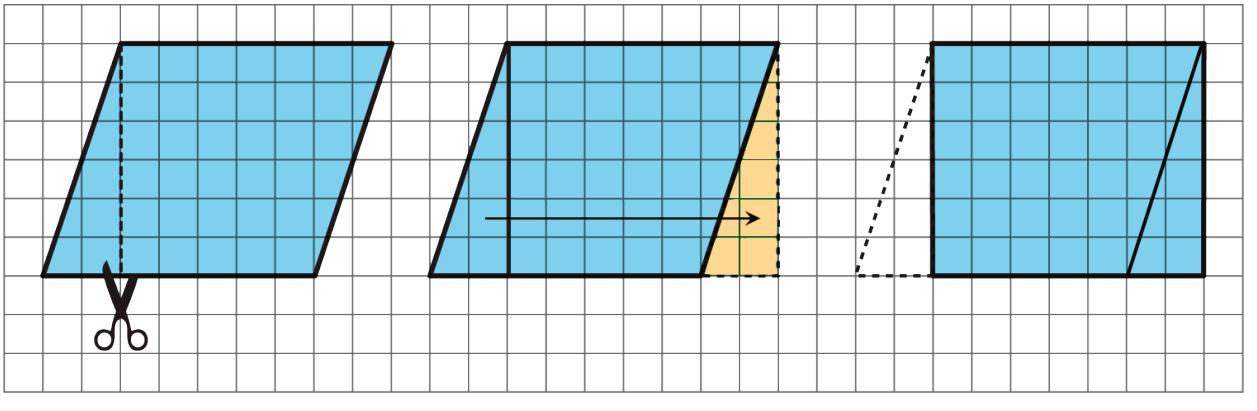
1 A Parallelogram and Its Rectangles (Warm up)

Student Task Statement

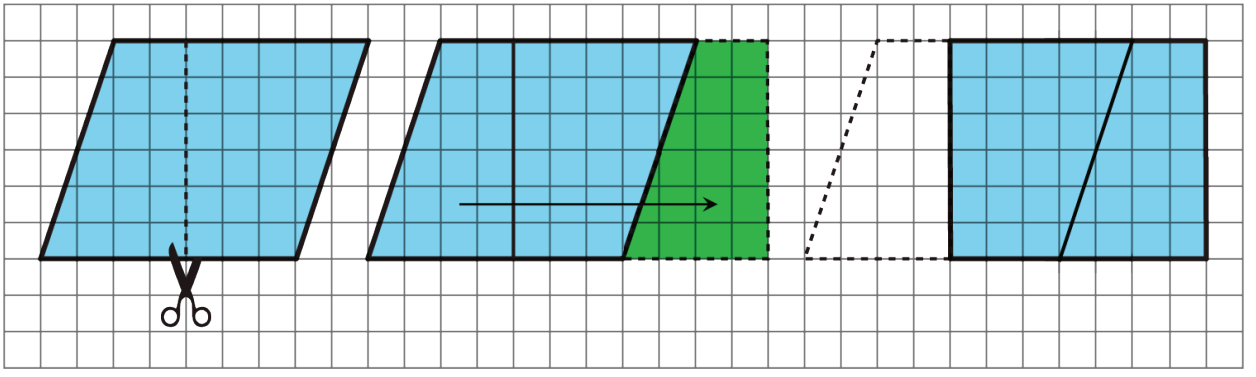
Elena and Tyler were finding the area of this parallelogram:



Here is how Elena did it:

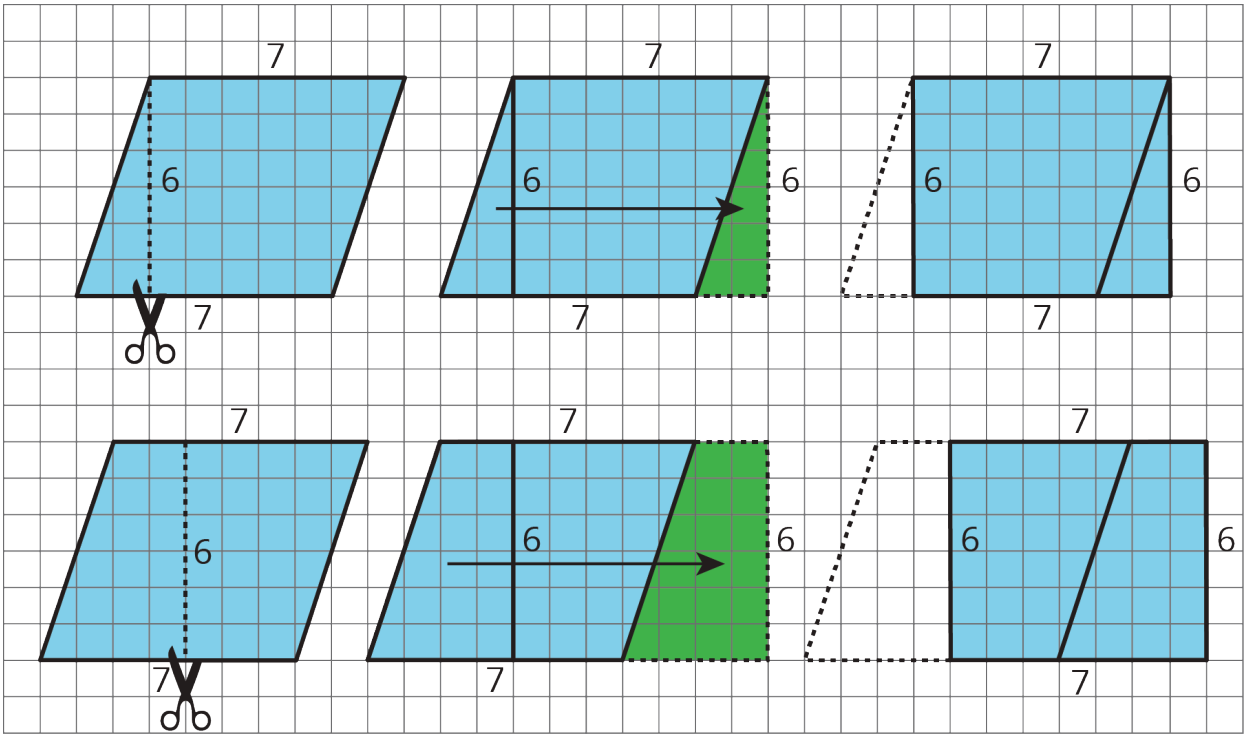


Here is how Tyler did it:



How are the two strategies for finding the area of a parallelogram the same? How they are different?

Activity Synthesis

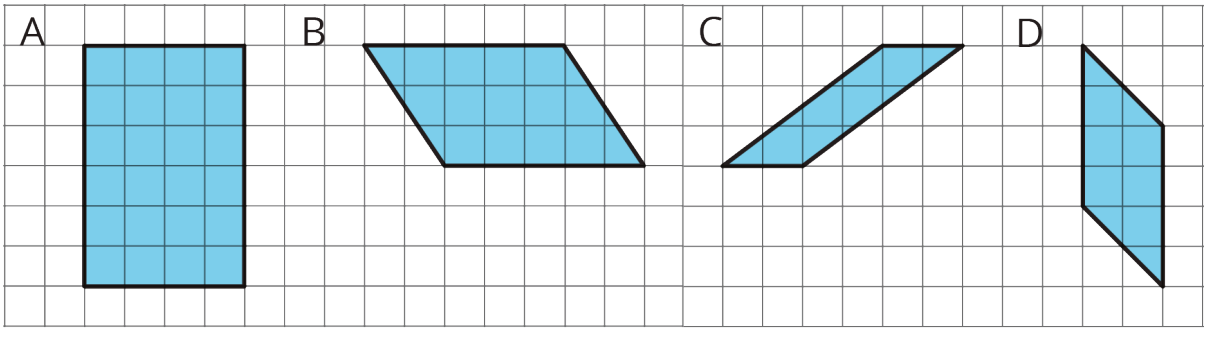


2 Finding the Formula for Area of Parallelograms

Student Task Statement

For each parallelogram:

- Identify a base and a corresponding height, and record their lengths in the table.
- Find the area of the parallelogram and record it in the last column of the table.



parallelogram	base (units)	height (units)	area (sq units)
A			
B			
C			
D			
any parallelogram	b	h	

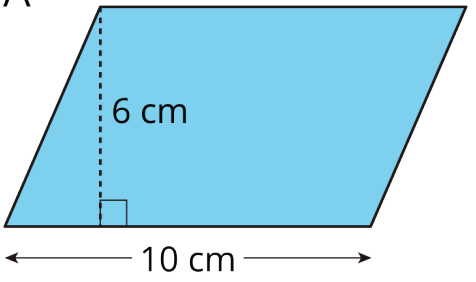
In the last row, write an expression for the area of any parallelogram, using b and h .

3 More Areas of Parallelograms

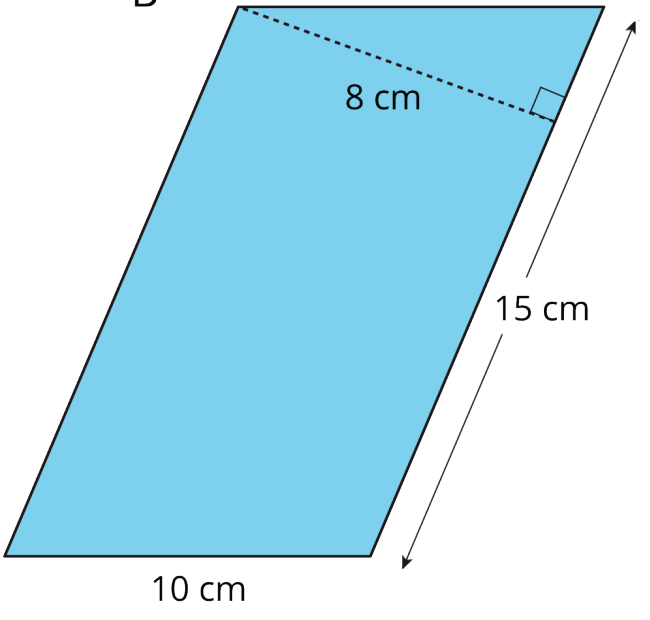
Student Task Statement

1. Find the area of each parallelogram. Show your reasoning.

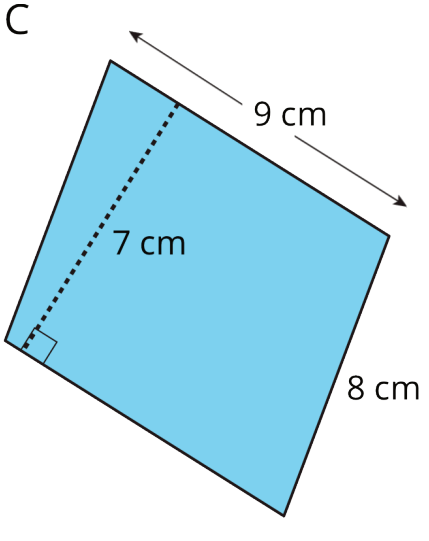
A



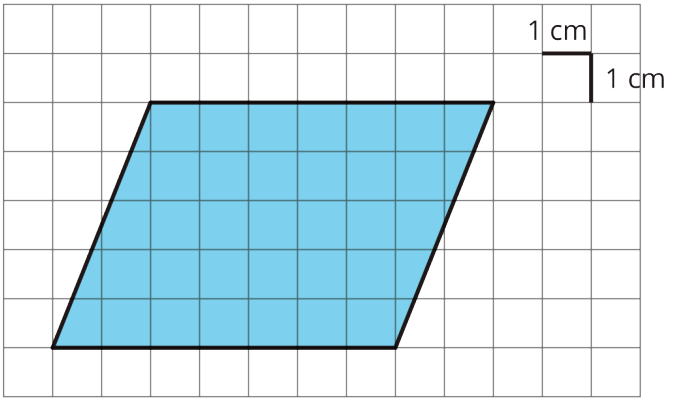
B



C



D



2. In Parallelogram B, what is the corresponding height for the base that is 10 cm long? Explain or show your reasoning.

3. Two different parallelograms P and Q both have an area of 20 square units. Neither of the parallelograms are rectangles.

   On the grid, draw two parallelograms that could be P and Q.