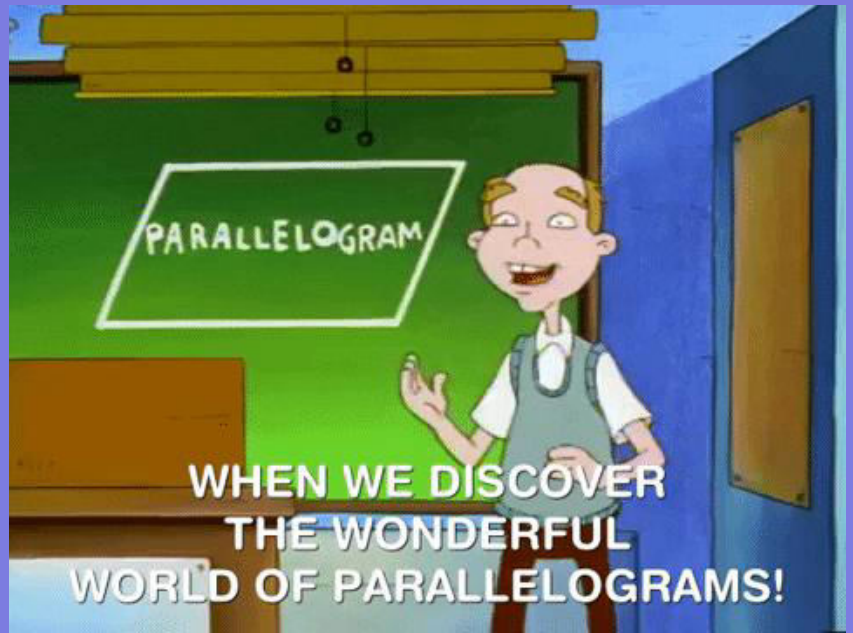
Parallelograms

CCSS Standards: Building on	• 4.G.A.2 • 5.G.B
CCSS Standards: Addressing	• 6.G.A.1

Lesson # 4

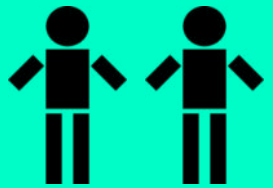
Let's investigate the features and area of parallelograms.



Features of a parallelogram

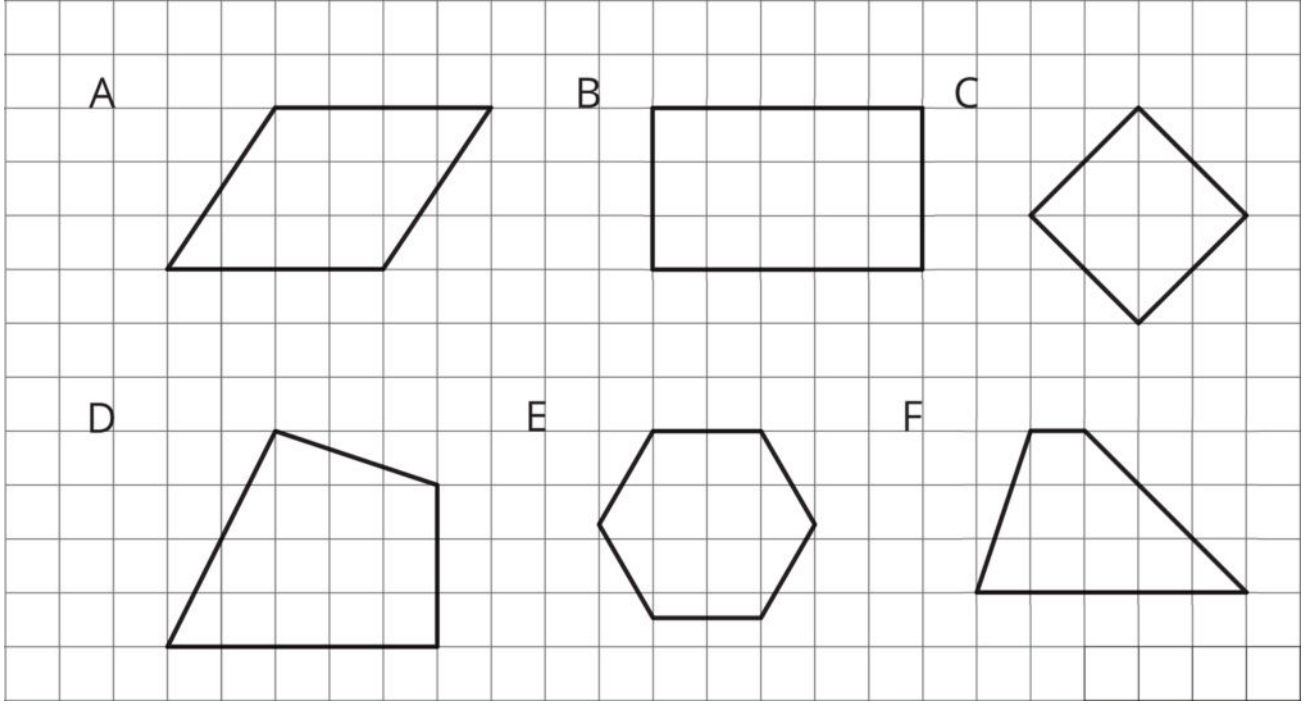
Warm Up 4.1

- **Notice & Wonder**



Today's Goals

- ❏ I can use reasoning strategies and what I know about the area of a rectangle to find the area of a parallelogram.
- ❏ I know how to describe the features of a parallelogram using mathematical vocabulary.

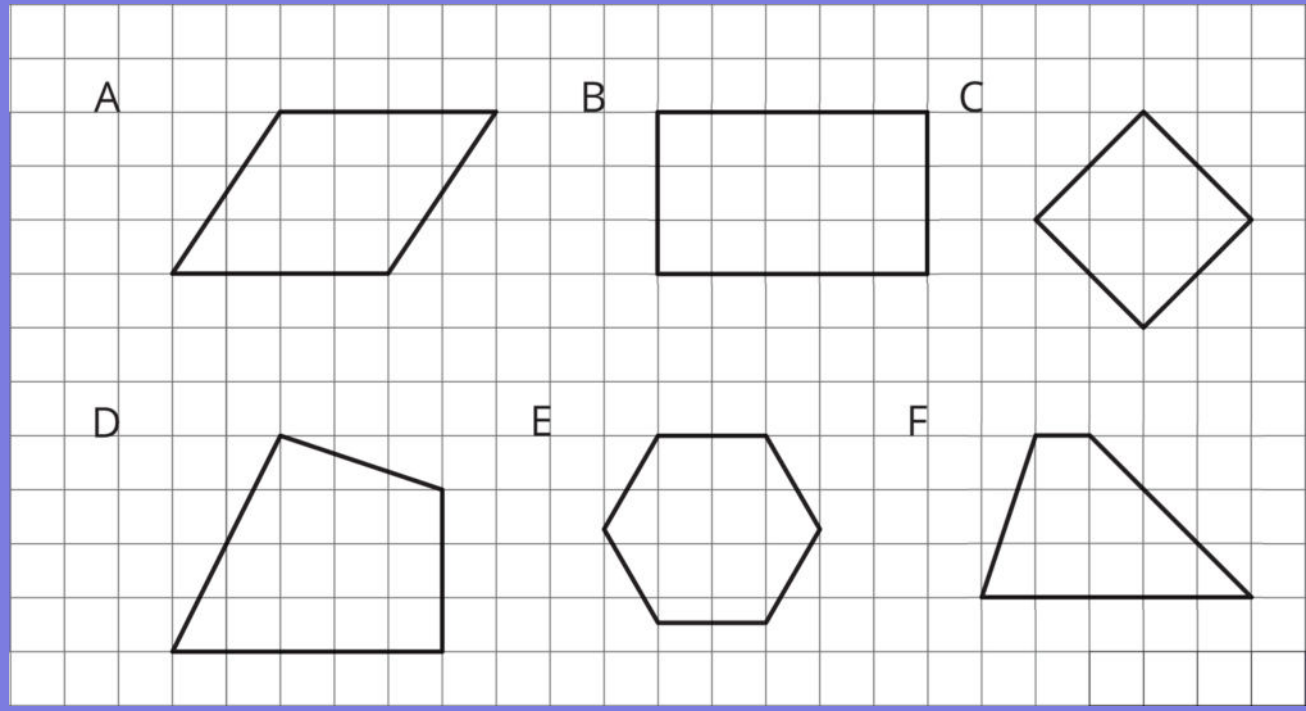


What Do you Notice?

What do you wonder?

A,B, & C are Parallelograms

D,E, & F are NOT Parallelograms



What do you notice about:

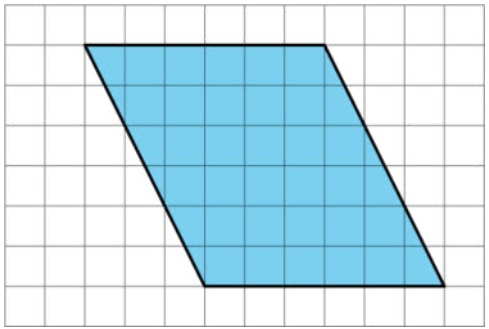
- the number of sides a parallelogram has?
- opposite sides of a parallelogram?
- opposite angles of a parallelogram?

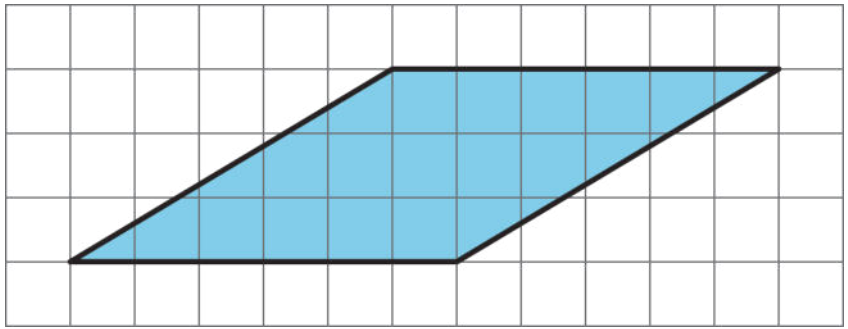
Area of a paralellogram

Activity 4.2

- **Anticipate, Monitor, Select, Sequence, Connect**

Find the area of each parallelogram. Show your reasoning.





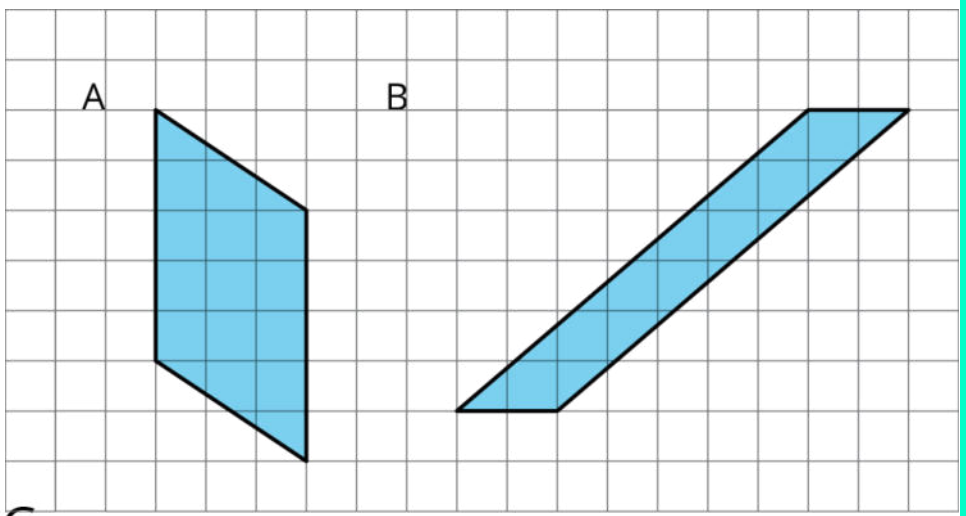
Let's Share & Reflect...

- Why did you decompose the parallelogram the way you did?
- Why did you rearrange the pieces the way you did?

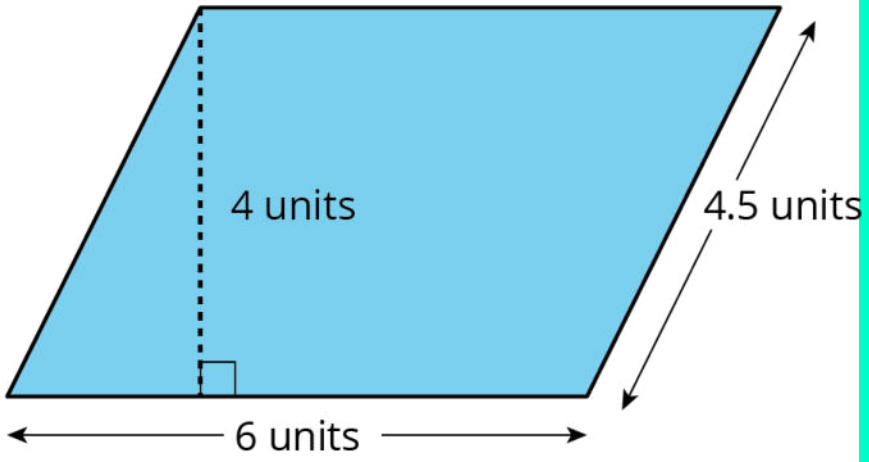
Lots of Parallelograms

Activity 4.3

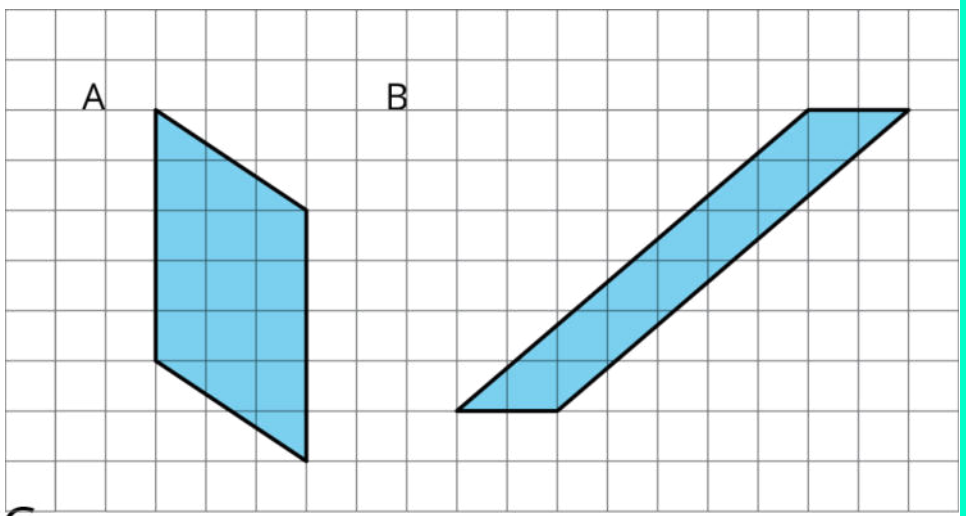
- **Anticipate, Monitor, Select, Sequence, Connect**



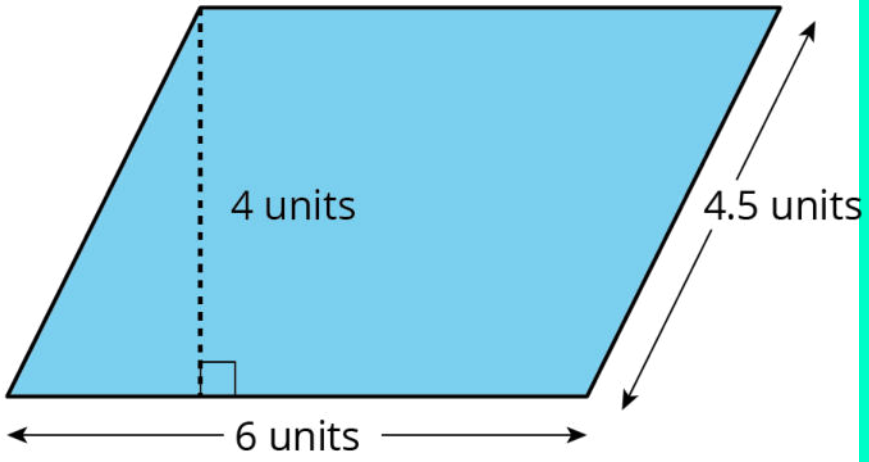
C



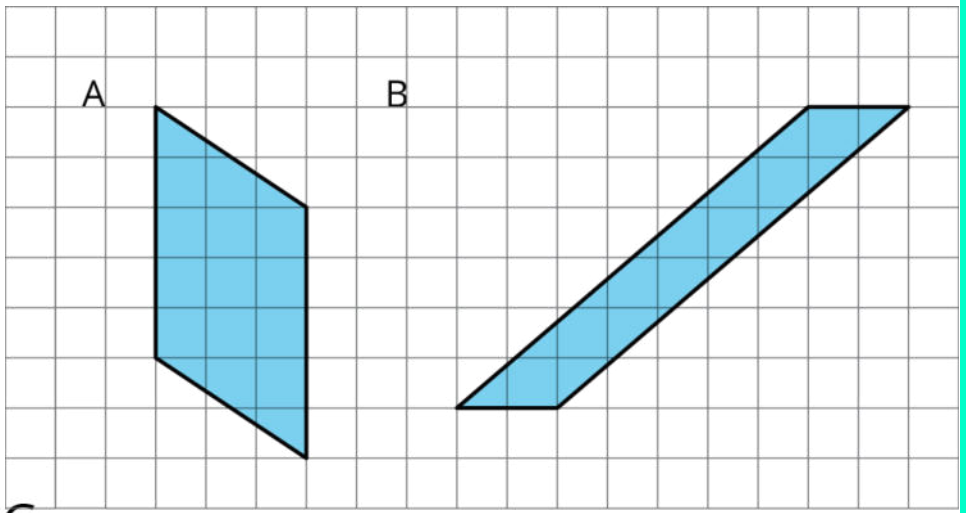
Find the area of each parallelogram. SHow your reasoning.



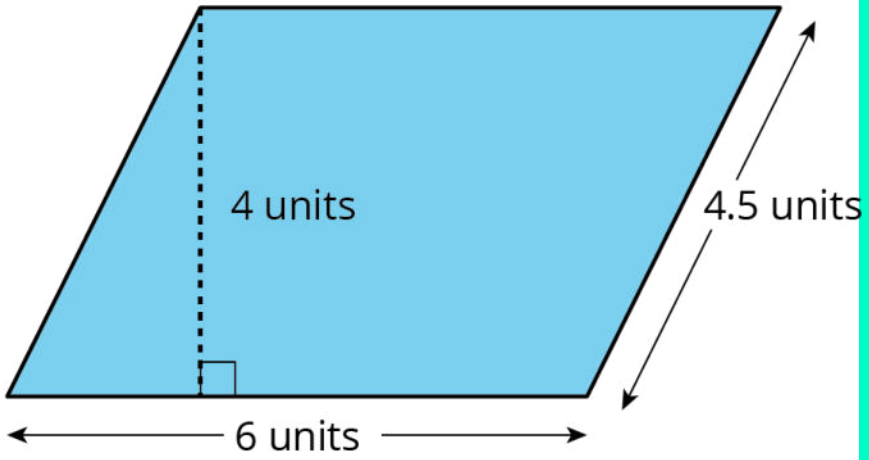
C



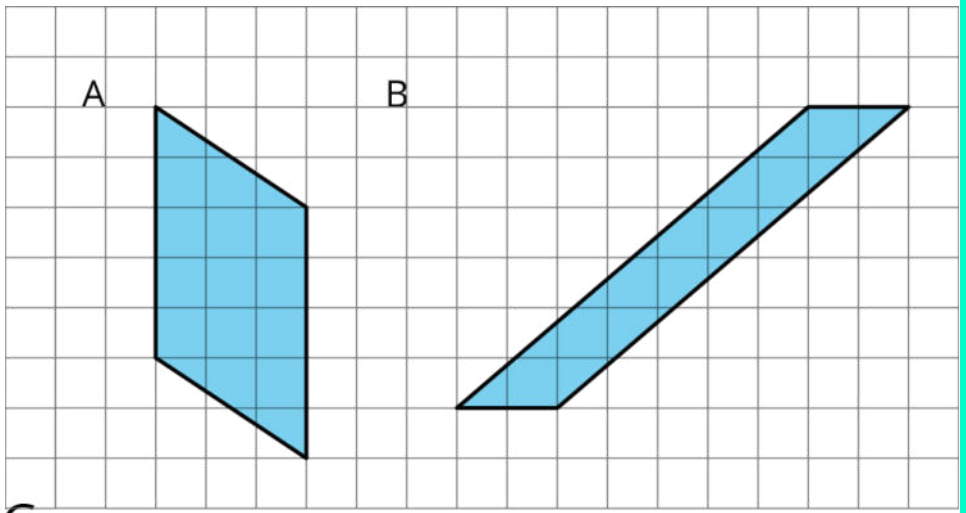
Is parallelogram A different than others you've seen so far? How so?



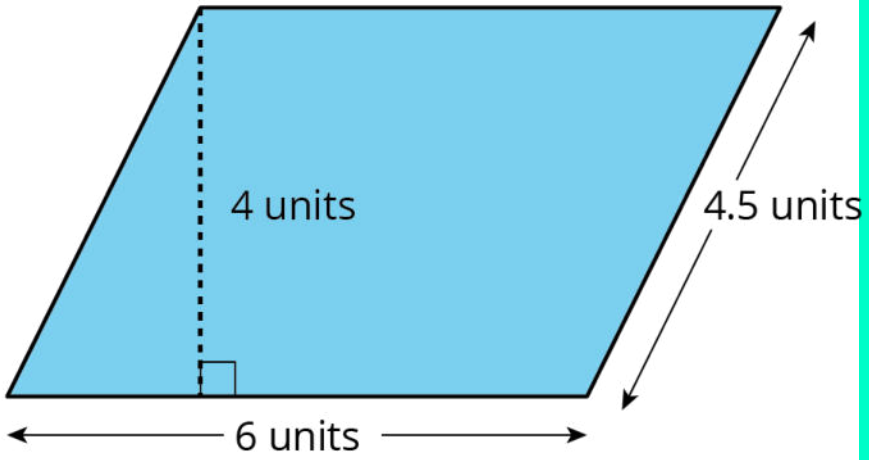
C



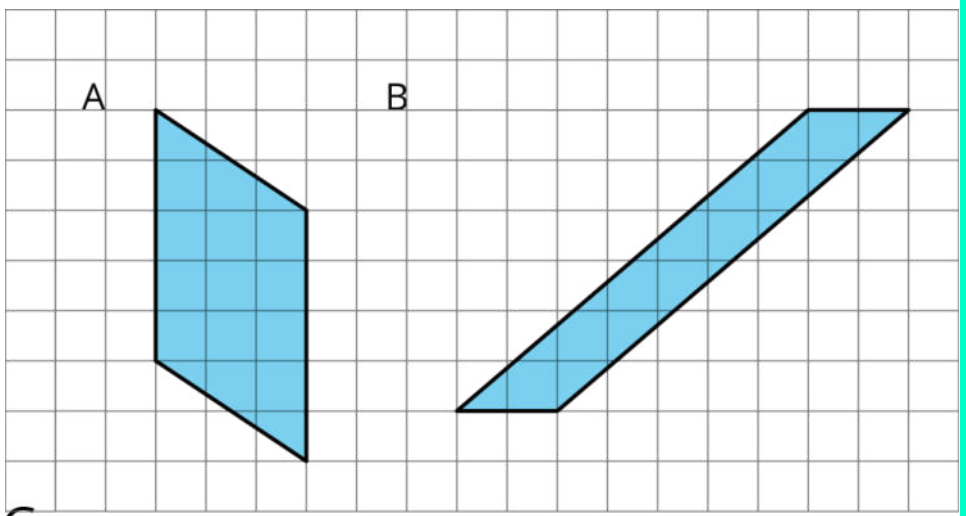
Which strategy—decomposing and rearranging, or enclosing and subtracting—seems more practical for finding a parallelogram such as B? Why?



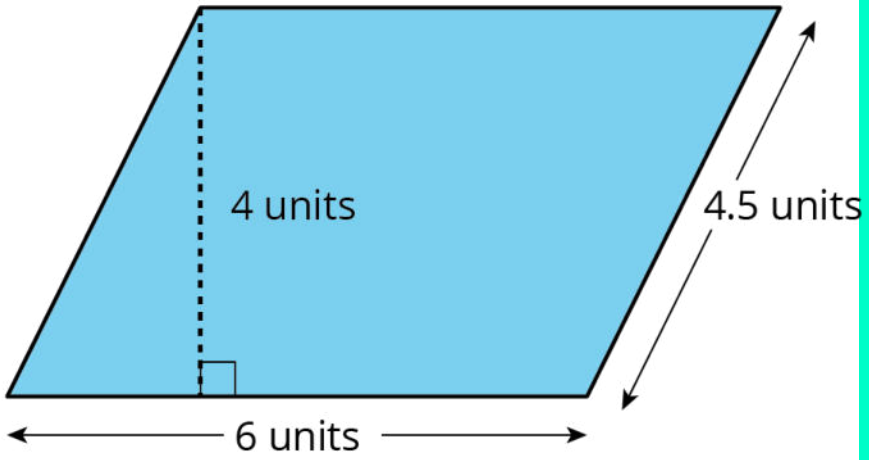
C



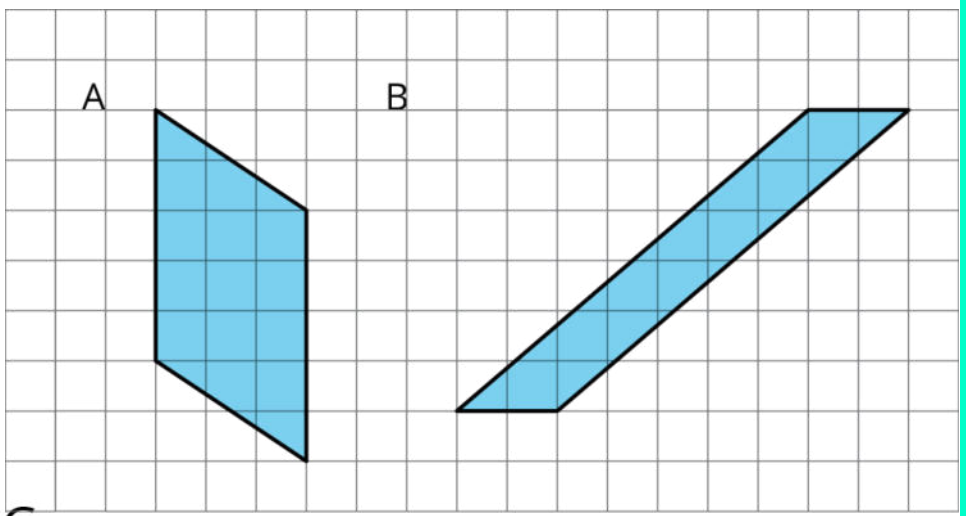
If you decomposed C into a right triangle and another shape, how do you know that the cut-out piece actually fits on the other side, given that there's no grid to verify?



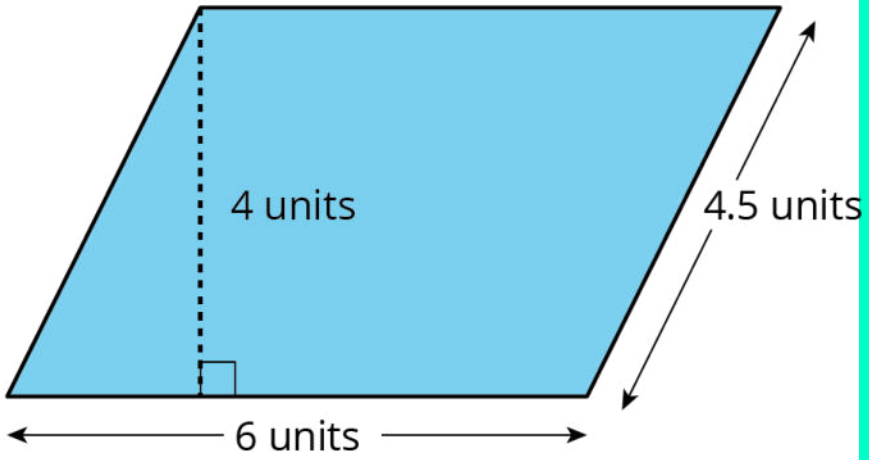
C



Three measurements are shown for Parallelogram C. Which ones did you use? Which ones did you not use? Why and why not?



C

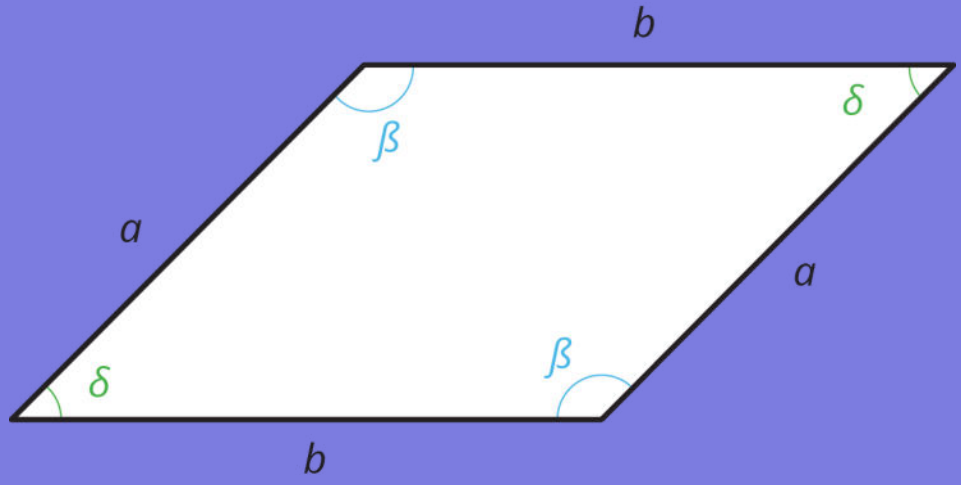


Why did your strategy make the most sense to you for this parallelogram?

Parallelogram

A parallelogram is a four-sided polygon with two pairs of parallel sides.

Parallelogram



Opposites sides have equal length

Opposite sides are parallel

Today's Goals

- ❏ I can use reasoning strategies and what I know about the area of a rectangle to find the area of a parallelogram.
- ❏ I know how to describe the features of a parallelogram using mathematical vocabulary.

How Would You Find the Area?

Cool Down 4.4