Unit 8, Lesson 3

Ways to Look at Quadrilaterals

Let's sort and identify quadrilaterals.

Warm-up

How Many Do You See: Brick Pattern

How many bricks have 2 pairs of parallel sides?

Activity 1

Quadrilateral Hunt

1. Find the quadrilaterals that have each of the following attributes. Record their letter names here.

attribute	quadrilaterals with the attribute
a. no right angles	
b. only 1 pair of parallel sides	
c. only 1 pair of perpendicular sides	
d. same length for all sides	
e. same size for all angles	
f. same length for only 2 sides	
g. no parallel sides	
h. 2 obtuse angles	

2. Choose 1 sentence to complete based on your work.

   a. I noticed some quadrilaterals . . .

   b. I noticed that all quadrilaterals . . .

   c. I noticed that no quadrilaterals . . .

_____

_____

_____

_____

If you have time: Do you think it's possible for a quadrilateral to have:

- More than 2 acute angles?

- More than 2 obtuse angles?

- Exactly 3 right angles?

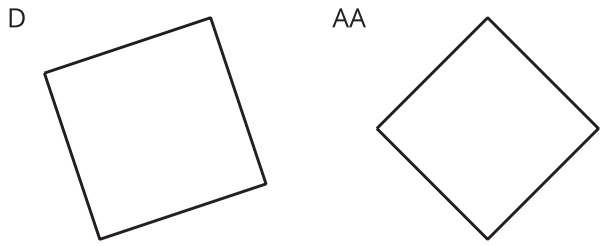
If you think so, sketch an example. If you don't think so, explain or show why you think it's impossible.

Activity 2

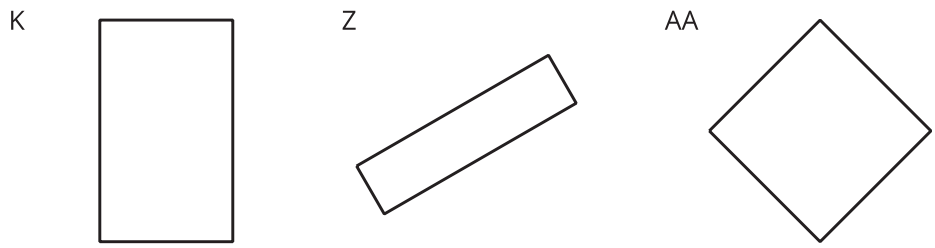
What's True about These Quadrilaterals?

Here are 4 sets of quadrilaterals.

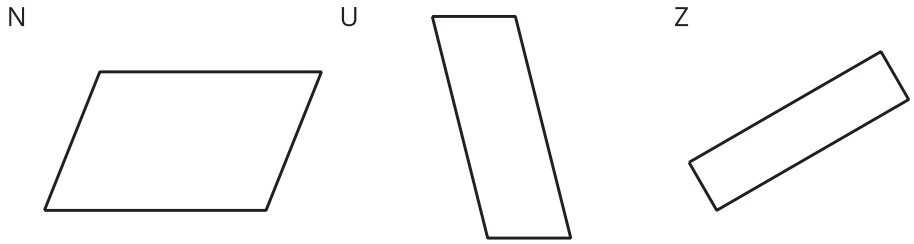
Quadrilaterals D and AA are squares.



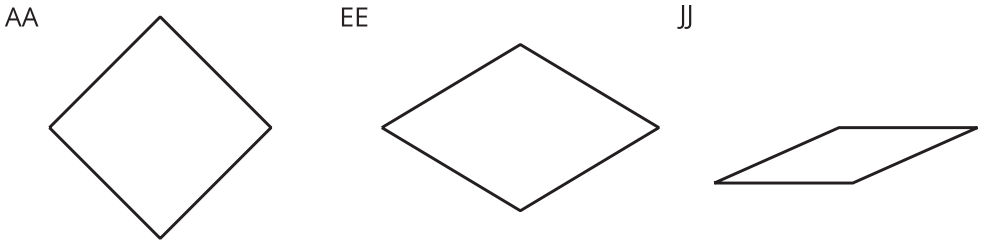
Quadrilaterals K, Z, and AA are rectangles.



Quadrilaterals N, U, and Z are parallelograms.



Quadrilaterals AA, EE, and JJ are rhombuses.



Write 4–5 statements about the sides and angles of the quadrilaterals in each set. Each statement must be true for *all* the shapes in the set.

square	rectangle
rhombus	parallelogram

 CC BY NC 2024
Illustrative Mathematics®

Activity 3

Guess Again

Partner A:

- Record an attribute that a quadrilateral could have. Don't show it to your partner.
- Find 3 quadrilaterals that have that attribute and 3 that don't. Record each quadrilateral's letter name in the correct column of the table.

Partner B:

- Study the quadrilaterals chosen by your partner.
- Pick another quadrilateral. Ask: "Does this quadrilateral have the attribute?"
- Find at least 1 quadrilateral that has the attribute and 1 that *does not* have it.
- Guess the attribute. If your guess is incorrect, ask more questions before guessing again.

Switch roles after the attribute is guessed correctly.

- Partner A's attribute: _____

have the attribute	do not have the attribute

- Partner B's attribute: _____

have the attribute	do not have the attribute