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?

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.
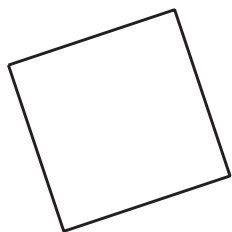
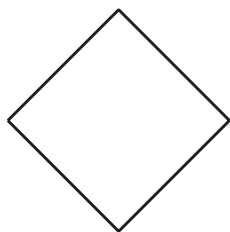# What's True about These Quadrilaterals?

Here are 4 sets of quadrilaterals.

Quadrilaterals D and AA are squares.
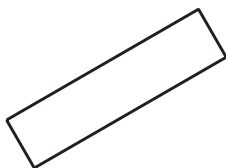
D   AA

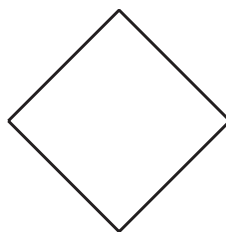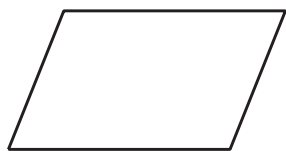Quadrilaterals K, Z, and AA are rectangles.
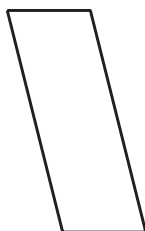
K   Z   AA

Quadrilaterals N, U, and Z are parallelograms.

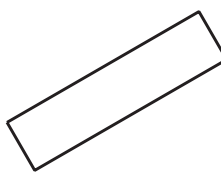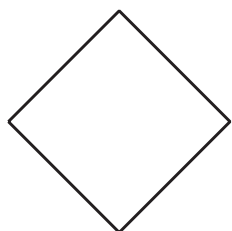N   U   Z
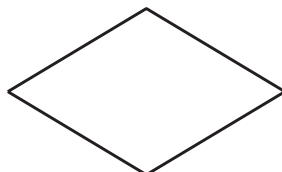
Quadrilaterals AA, EE, and JJ are rhombuses.

AA   EE   JJ

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

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