## 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?


## 3.1: 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. one pair of parallel sides |  |
| c. one pair of perpendicular <br> sides |  |
| d. same length for all sides |  |
| e. same size for all angles |  |
| f. same length for only two sides |  |
| g. no parallel sides |  |
| h. two obtuse angles |  |

2. Choose one 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 is 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 is impossible.

## 3.2: What's True about These Quadrilaterals?

Here are four 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 |

## 3.3: Guess Again

## Partner A:

- Write down 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. Place them in the columns of the table.

Partner B:

- Study the quadrilaterals chosen by your partner.
- Pick another quadrilateral from the set. Ask: "Does this quadrilateral have the attribute?"
- Find at least 1 quadrilateral that has the attribute and 1 that doesn't.
- Guess the attribute. If your guess is off, ask more questions before guessing again.

Switch roles after the attribute is guessed correctly.

- Partner A's attribute:

- Partner B's attribute:

| have the attribute | do not have the attribute |
| :---: | :---: |

