Parallel Side Detectives

Sort quadrilaterals by their parallel sides.

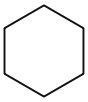
4.MG.5.d.i "Compare, contrast, and classify quadrilaterals (parallelograms, rectangles, squares, rhombi, and/or trapezoids) based on the following properties and attributes: parallel sides;"

NAME _____ DATE _____

HAS PARALLEL SIDES

This shape has at least one pair of sides that stay the same distance apart and never meet.

A regular hexagon has pairs of opposite sides that are parallel.



HAS NO PARALLEL SIDES

This shape has no pair of sides that stay the same distance apart.

A triangle has no parallel sides.



1 SORT

8 items

For each figure, circle PARALLEL or NO PAIRS.

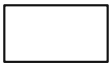
1. 

Figure 1

PARALLEL NO PAIRS

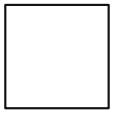
2. 

Figure 2

PARALLEL NO PAIRS

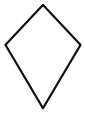
3. 

Figure 3

PARALLEL NO PAIRS

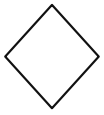
4. 

Figure 4

PARALLEL NO PAIRS

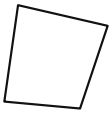
5. 

Figure 5

PARALLEL NO PAIRS

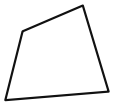
6. 

Figure 6

PARALLEL NO PAIRS

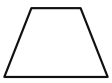
7. 

Figure 7

PARALLEL NO PAIRS

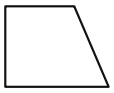
8. 

Figure 8

PARALLEL NO PAIRS

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Part 2 PROVE IT: Pick two figures from Part 1. For each figure, name the category and explain which sides helped you decide. Part 3 MAKE YOUR OWN: Draw one new quadrilateral for each category, then label it PARALLEL or NO PAIRS.

PARALLEL

NO PAIRS

CHALLENGE

Draw a quadrilateral with exactly one pair of parallel sides. Mark the parallel pair with matching arrow marks.

ANSWER KEY # Parallel Side Detectives

GRADE 4 · 4.MG.5.d.i

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (rectangle)	**PARALLEL**	A rectangle has two pairs of parallel opposite sides.
2	Figure 2 (square)	**PARALLEL**	A square has two pairs of parallel opposite sides.
3	Figure 3 (kite)	**NO PAIRS**	This kite has no parallel side pair.
4	Figure 4 (rhombus)	**PARALLEL**	A rhombus has two pairs of parallel opposite sides.
5	Figure 5 (polygon)	**NO PAIRS**	No two sides of this quadrilateral are parallel.
6	Figure 6 (polygon)	**NO PAIRS**	No two sides of this quadrilateral are parallel.
7	Figure 7 (trapezoid)	**PARALLEL**	A trapezoid has one pair of parallel sides.
8	Figure 8 (right_trapezoid)	**PARALLEL**	A right trapezoid has one pair of parallel sides.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **PARALLEL**: Draw a four-sided shape with one pair of opposite sides that stay the same distance apart.
- **NO PAIRS**: Draw a four-sided shape with no sides that stay the same distance apart.

Challenge: A trapezoid with its top and bottom sides marked with matching arrow marks.

Accept Part 2 explanations that correctly identify a parallel pair or explain that no side pair stays the same distance apart. For Part 3, students may draw any accurate quadrilateral that matches each label.