Parallel Pair Detectives

Sort figures by their parallel sides.

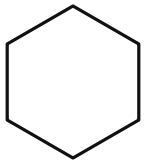
NY-5.G.4 "Classify two-dimensional figures in a hierarchy based on properties."

NAME _____ DATE _____

AT LEAST ONE PAIR OF PARALLEL SIDES

These figures have at least one pair of sides that stay the same distance apart and never meet. A figure may have one pair, two pairs, or more.

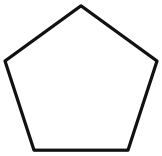
This hexagon has pairs of opposite sides that are parallel.



NO PAIRS OF PARALLEL SIDES

These figures do not have any sides that stay the same distance apart and never meet.

This pentagon has no pairs of parallel sides.



1 SORT

8 items

Circle PARALLEL or NONE for each figure, then pick two figures, one from each category, and explain how you know.

1.

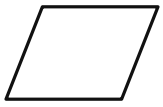


Figure 1

PARALLEL **NONE**

2.

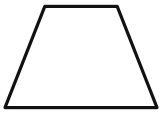


Figure 2

PARALLEL **NONE**

3.

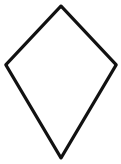


Figure 3

PARALLEL **NONE**

4.

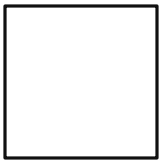


Figure 4

PARALLEL **NONE**

5.

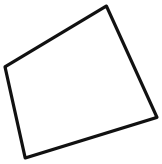


Figure 5

PARALLEL **NONE**

6.

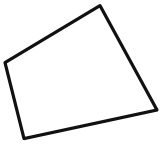


Figure 6

PARALLEL **NONE**

7.

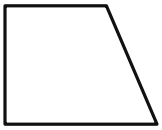


Figure 7

PARALLEL **NONE**

8.



Figure 8

PARALLEL **NONE**

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

Write one new example for PARALLEL and one new example for NONE.

PARALLEL _____

NONE _____

CHALLENGE

Name a figure with two pairs of parallel sides and explain why it belongs in PARALLEL.

ANSWER KEY

Parallel Pair Detectives

GRADE 5 · NY-5.G.4

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (parallelogram)	**PARALLEL**	A parallelogram has two pairs of parallel sides.
2	Figure 2 (trapezoid)	**PARALLEL**	A trapezoid has at least one pair of parallel sides.
3	Figure 3 (kite)	**NONE**	This kite has no pairs of parallel sides.
4	Figure 4 (square)	**PARALLEL**	A square has two pairs of parallel sides.
5	Figure 5 (polygon)	**NONE**	No two sides of this quadrilateral are parallel.
6	Figure 6 (polygon)	**NONE**	No two sides of this quadrilateral are parallel.
7	Figure 7 (right_trapezoid)	**PARALLEL**	A right trapezoid has at least one pair of parallel sides.
8	Figure 8 (rectangle)	**PARALLEL**	A rectangle has two pairs 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**: A rhombus.
- **NONE**: A triangle.

Challenge: A rectangle belongs in PARALLEL because it has two pairs of parallel sides.

Answers for the sort are 1 PARALLEL, 2 PARALLEL, 3 NONE, 4 PARALLEL, 5 NONE, 6 NONE, 7 PARALLEL, and 8 PARALLEL. Accept any correctly named or drawn examples in Part 3 that match the category.