Side Count Sleuth

Use sides to sort plane figures.

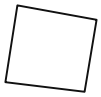
5.GSR.8.2 "Determine, through exploration and investigation, that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category."

NAME _____ DATE _____

FOUR SIDES

These figures have exactly four straight sides. A special kind of four-sided figure belongs here too.

An outline with four straight sides.



NOT FOUR SIDES

These figures do not have exactly four straight sides. A curved edge does not count as a straight side.

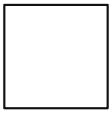
A figure with one curved edge and one straight edge.



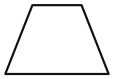
1 SORT

8 items

Circle the category for each figure, then choose two figures and explain how you counted their sides.

1.  Figure 1

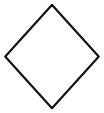
FOUR SIDES | NOT FOUR

2.  Figure 2

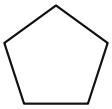
FOUR SIDES | NOT FOUR

3.  Figure 3

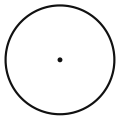
FOUR SIDES | NOT FOUR

4.  Figure 4

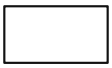
FOUR SIDES | NOT FOUR

5.  Figure 5

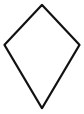
FOUR SIDES | NOT FOUR

6.  Figure 6

FOUR SIDES | NOT FOUR

7.  Figure 7

FOUR SIDES | NOT FOUR

8.  Figure 8

FOUR SIDES | NOT FOUR

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

Draw and label one new figure for FOUR SIDES and one new figure for NOT FOUR.

FOUR SIDES

NOT FOUR

CHALLENGE

Draw a four-sided figure with two pairs of parallel sides. Explain why it belongs in FOUR SIDES.

ANSWER KEY

Side Count Sleuth

GRADE 5 · 5.GSR.8.2

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (square)	**FOUR SIDES**	A square has four straight sides.
2	Figure 2 (trapezoid)	**FOUR SIDES**	A trapezoid has four straight sides.
3	Figure 3 (triangle)	**NOT FOUR**	A triangle has three straight sides.
4	Figure 4 (rhombus)	**FOUR SIDES**	A rhombus has four straight sides.
5	Figure 5 (pentagon)	**NOT FOUR**	A pentagon has five straight sides.
6	Figure 6 (circle)	**NOT FOUR**	A circle has no straight sides.
7	Figure 7 (rectangle)	**FOUR SIDES**	A rectangle has four straight sides.
8	Figure 8 (kite)	**FOUR SIDES**	A kite has four straight 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)

- **FOUR SIDES**: an irregular quadrilateral.
- **NOT FOUR**: a heptagon.

Challenge: A parallelogram has two pairs of parallel sides and four straight sides, so it belongs in FOUR SIDES.

For Part 2, accept explanations that count the straight sides correctly for any two chosen figures. Emphasize that figures with extra properties, such as equal sides or parallel sides, still have the four sides of their larger category.