Shape Family Sort

Sort the figures, explain two choices, then create your own examples.

5.GR.B.2 "Explain that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category (e.g., all rectangles have four right angles and squares are rectangles, so all squares have four right angles)."

NAME _____ DATE _____

RECTANGLE FAMILY

These figures have four sides and four right angles. Every smaller group within this family keeps those four right angles, even if it has an extra trait.

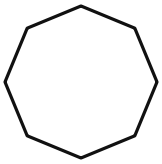
A doorway outline belongs in this family.



OUTSIDE THE FAMILY

These figures do not have both four sides and four right angles.

A stop sign outline belongs here.



1 SORT

8 items

For each numbered figure, circle RECTANGLE or OTHER.

1.

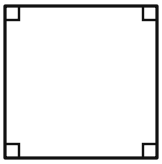


Figure 1

RECTANGLE **OTHER**

2.



Figure 2

RECTANGLE **OTHER**

3.

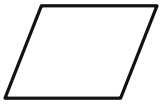


Figure 3

RECTANGLE **OTHER**

4.

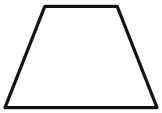


Figure 4

RECTANGLE **OTHER**

5.

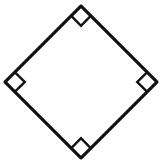


Figure 5

RECTANGLE **OTHER**

6.

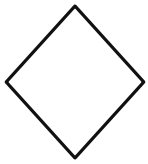


Figure 6

RECTANGLE **OTHER**

7.

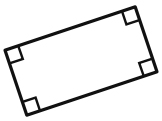


Figure 7

RECTANGLE **OTHER**

8.

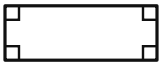


Figure 8

RECTANGLE **OTHER**

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 or describe one new figure for each category. Tell how you know where each belongs.

RECTANGLE

OTHER

CHALLENGE

A classmate says a figure with four equal sides cannot be in the rectangle family. Is that true? Explain with an example.

ANSWER KEY

Shape Family Sort

GRADE 5 · 5.GR.B.2

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (square)	**RECTANGLE**	It has four right angles; equal side lengths do not change that.
2	Figure 2 (rectangle)	**RECTANGLE**	It has four sides and four right angles.
3	Figure 3 (parallelogram)	**OTHER**	Its corners are not right angles.
4	Figure 4 (trapezoid)	**OTHER**	It does not have four right angles.
5	Figure 5 (polygon)	**RECTANGLE**	All four corners are right angles, even though the figure is turned.
6	Figure 6 (rhombus)	**OTHER**	Its sides are equal, but its corners are not right angles.
7	Figure 7 (polygon)	**RECTANGLE**	Adjacent sides meet at right angles.
8	Figure 8 (polygon)	**RECTANGLE**	It has four sides and four right angles.

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)

- **RECTANGLE**: A 3 cm by 8 cm rectangle. It has four right angles.
- **OTHER**: A triangle with sides 4 cm, 5 cm, and 6 cm. It has only three sides.

Challenge: No. A square has four equal sides and four right angles, so it is in the rectangle family.

For Part 2, accept any two item explanations that identify whether the figures have four right angles. A square inherits the four-right-angle property from the rectangle family; equal sides are an additional trait.