Fold It Fair

Sort figures by whether a fold can make matching halves.

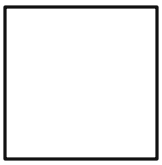
MA.2.GR.1 "Identify and analyze two-dimensional figures and identify lines of symmetry."

NAME _____ DATE _____

HAS A LINE OF SYMMETRY

A line of symmetry splits a figure into two matching halves. You could fold on the line and the halves would match.

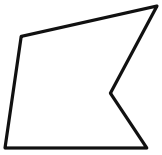
A square has lines of symmetry.



HAS NO LINE OF SYMMETRY

This figure cannot be folded into two matching halves. No fold line makes both sides match.

This uneven five-sided figure has no line of symmetry.



1 SORT

8 items

Circle SYMMETRY or NO LINE for each figure; then pick two figures and tell how you knew.

1.



Figure 1

SYMMETRY NO LINE

2.

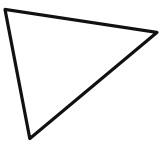


Figure 2

SYMMETRY NO LINE

3.

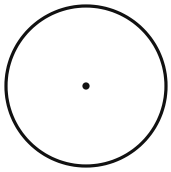


Figure 3

SYMMETRY **NO LINE**

4.

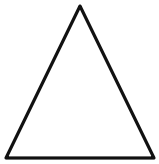


Figure 4

SYMMETRY **NO LINE**

5.

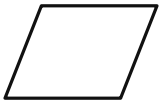


Figure 5

SYMMETRY **NO LINE**

6.

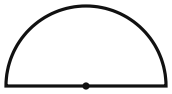


Figure 6

SYMMETRY **NO LINE**

7.

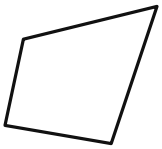


Figure 7

SYMMETRY **NO LINE**

8.

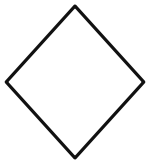


Figure 8

SYMMETRY **NO LINE**

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 figure that belongs in SYMMETRY and one new figure that belongs in NO LINE.

SYMMETRY

NO LINE

CHALLENGE

Draw a figure with exactly 1 line of symmetry. Draw the symmetry line on your figure.

ANSWER KEY # Fold It Fair

GRADE 2 · MA.2.GR.1

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	Figure 1 (rectangle)	**SYMMETRY**	A rectangle has 2 lines of symmetry, one vertical and one horizontal.
2	Figure 2 (polygon)	**NO LINE**	This scalene triangle has no line that makes matching halves.
3	Figure 3 (circle)	**SYMMETRY**	A circle has many lines of symmetry through its center.
4	Figure 4 (isosceles)	**SYMMETRY**	An isosceles triangle has 1 line of symmetry from the top vertex to the middle of the base.
5	Figure 5 (parallelogram)	**NO LINE**	A slanted parallelogram has no line of symmetry.
6	Figure 6 (semicircle)	**SYMMETRY**	A semicircle has 1 line of symmetry through the middle, perpendicular to its flat side.
7	Figure 7 (polygon)	**NO LINE**	This uneven four-sided figure has no line that makes matching halves.
8	Figure 8 (rhombus)	**SYMMETRY**	A rhombus has 2 lines of symmetry, along its diagonals.

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)

- **SYMMETRY**: A regular hexagon.
- **NO LINE**: A scalene triangle.

Challenge: Draw a non-equilateral isosceles triangle. Draw a line from the top vertex to the middle of the base.

For the explanation portion, accept answers that say a figure can or cannot fold into two matching halves. Figures 1, 3, 4, 6, and 8 are SYMMETRY. Figures 2, 5, and 7 are NO LINE.