LESSON MAKER PRO

Find the Fold

Count and describe lines of symmetry.

GRADE 6 · 6.GM.1.3

6.GM.1.3 "Identify and describe the line(s) of symmetry in two-dimensional shapes."

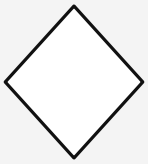
NAME _____ DATE _____

THE BIG IDEA

A line of symmetry divides a shape into two halves that match when folded along the line. To find every line, imagine folding the shape in different ways and count only the folds that make both halves match.

WORKED EXAMPLE

How many lines of symmetry does this shape have?



1. Imagine a fold joining the top and bottom corners. The halves match.
2. Imagine a fold joining the left and right corners. The halves match.
3. No other fold makes the halves match.

Answer: 2 lines of symmetry

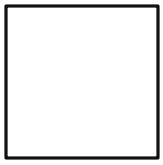
PRACTICE 6 problems

1 How many lines of symmetry does this shape have?



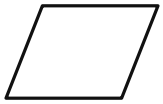
ANSWER _____

2 How many lines of symmetry does this shape have? Describe where they go.



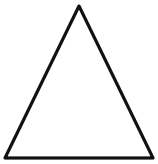
ANSWER _____

3 How many lines of symmetry does this shape have?



ANSWER _____

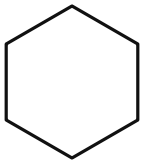
4 How many lines of symmetry does this shape have? Describe one.



ANSWER _____

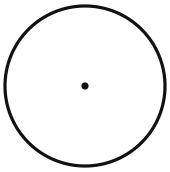
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5 How many lines of symmetry does this regular shape have?



ANSWER _____

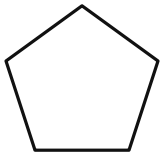
6 How many lines of symmetry does this shape have?



ANSWER _____

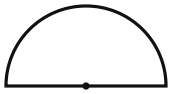
APPLY IT Show your work

1 A gaming club uses the regular badge shown. How many lines of symmetry does the badge have? Describe where each line starts and ends.



ANSWER _____

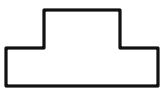
2 A game designer uses the icon shown for a menu button. How many lines of symmetry does it have? Describe the line.



ANSWER _____

CHALLENGE One step up

How many lines of symmetry does this shape have? Describe each line, and explain why a fold across the middle from left to right does not work.



WORK SPACE AND ANSWER

ANSWER KEY

Find the Fold

GRADE 6 · 6.GM.1.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	How many lines of symmetry does this shape have?	**2**
2	How many lines of symmetry does this shape have? Describe where they go.	**4: one vertical, one horizontal, and two diagonal lines through opposite corners.**
3	How many lines of symmetry does this shape have?	**0**
4	How many lines of symmetry does this shape have? Describe one.	**1: from the top corner to the midpoint of the opposite side.**
5	How many lines of symmetry does this regular shape have?	**6**
6	How many lines of symmetry does this shape have?	**Infinitely many**

PART 2 · APPLY IT

1. **5 lines. Each goes from a corner to the midpoint of the opposite side.** Each of the five corners gives one fold that makes the halves match.
2. **1 line. It runs from the midpoint of the flat side to the middle of the curved edge.** Only a fold through the midpoint of the flat side makes the two halves match.

CHALLENGE

1 line, vertically through the middle. A left-to-right fold does not work because the wider bottom part would not match the narrower top part.

Accept descriptions of fold lines in place of direction words. For the circle, accept any wording that clearly means there is no limit to the number of lines.