LESSON MAKER PRO

Symmetry Shape Check

Compare fold lines in five quadrilaterals.

GRADE 7 · 7.MG.3.a.iii

7.MG.3.a.iii "Compare and contrast properties of the following quadrilaterals: parallelogram, rectangle, square, rhombus, and trapezoid: lines of symmetry."

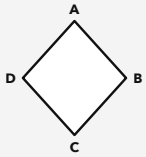
NAME _____ DATE _____

FOLD LINES THAT MATCH

A line of symmetry divides a figure into matching mirror-image halves. Imagine folding on a line. Count the folds that make both halves match exactly.

WORKED EXAMPLE

Look at the rhombus. How many lines of symmetry does it have?



1. Fold along diagonal AC. The halves match.
2. Fold along diagonal BD. The halves match.
3. No other fold makes matching halves.

Answer: 2 lines of symmetry.

PRACTICE 4 problems

1 How many lines of symmetry does a general parallelogram have?

ANSWER _____

2 Which quadrilateral has 4 lines of symmetry?

ANSWER _____

3 How many lines of symmetry does an isosceles trapezoid have?

ANSWER _____

4 Compare a rectangle and a square. What symmetry lines does the square have that a non-square rectangle does not?

ANSWER _____

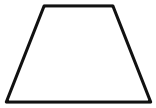
APPLY IT Show your work

1 A game streamer uses the shown rectangle for a profile frame. Name the directions of its lines of symmetry.



ANSWER _____

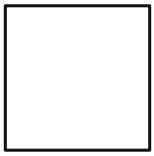
2 A design club cuts the shown isosceles trapezoid for a badge. How many lines of symmetry does the badge have?



ANSWER _____

CHALLENGE One step up

The shown square is also a rectangle. Explain why its symmetry is not limited to the symmetry of a non-square rectangle.



WORK SPACE AND ANSWER

ANSWER KEY

Symmetry Shape Check

GRADE 7 · 7.MG.3.a.iii

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	How many lines of symmetry does a general parallelogram have?	**0 lines of symmetry.**
2	Which quadrilateral has 4 lines of symmetry?	**square**
3	How many lines of symmetry does an isosceles trapezoid have?	**1 line of symmetry.**
4	Compare a rectangle and a square. What symmetry lines does the square have that a non-square rectangle does not?	**A square has diagonal lines of symmetry. A non-square rectangle does not have diagonal symmetry.**

PART 2 · APPLY IT

1. **horizontal and vertical** A rectangle matches when folded across its horizontal center line or its vertical center line.
2. **1 line of symmetry.** The vertical line through the middle divides an isosceles trapezoid into matching halves.

CHALLENGE

Its diagonals are also lines of symmetry. A non-square rectangle has no diagonal lines of symmetry.

Accept "none" for 0 lines of symmetry. For rectangle symmetry, accept "across the middle from side to side and top to bottom" for horizontal and vertical.