

Fold and Find

Test proposed fold lines and draw matching halves.

GRADE 2 • MA.2.GR.1.3

MA.2.GR.1.3 "Identify line(s) of symmetry for a two-dimensional figure."

NAME _____

DATE _____

LOOK, DESCRIBE AND EXPLAIN

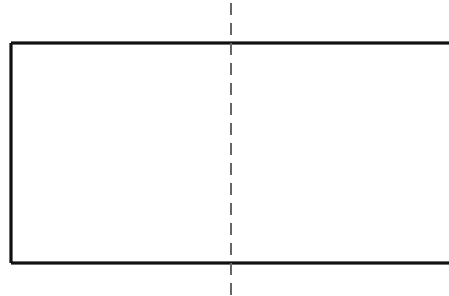
A line of symmetry is a fold line that makes the two halves match exactly. Matching area alone is not enough: edges and corners must line up. A dashed line is a proposed fold to test.

WORKED EXAMPLE

Is the dashed line a line of symmetry?

1. Imagine folding along the dashed line.
2. The left and right edges and corners match exactly.

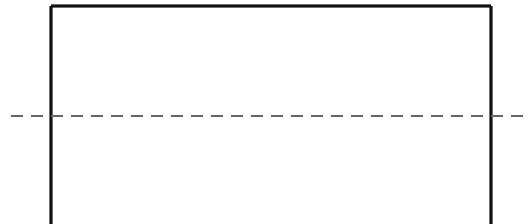
Answer: Yes. It is a line of symmetry.



PRACTICE 4 problems

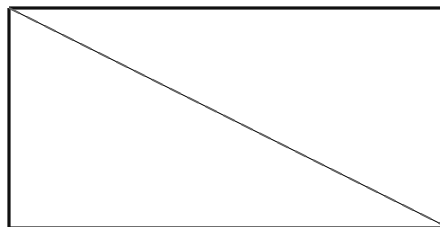
- 1** Test the dashed line. Write yes or no and tell whether the halves match.

ANSWER _____



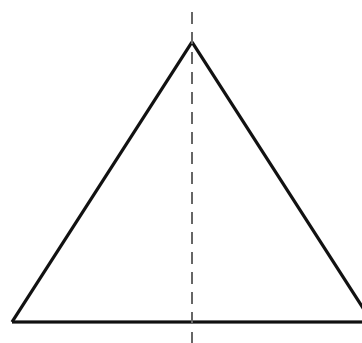
- 2** Test this corner-to-corner dashed line. Do the two halves match when folded?

ANSWER _____



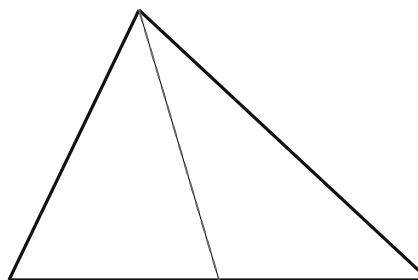
- 3** Test the dashed line in this triangle. Explain your decision.

ANSWER _____



- 4** Test the dashed line in this triangle. Explain your decision.

ANSWER _____

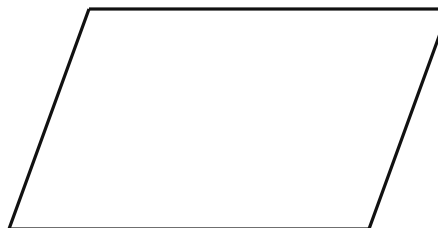


APPLY IT Show your work

- 1** This square is a paper tile. Draw every line of symmetry. How many did you draw?

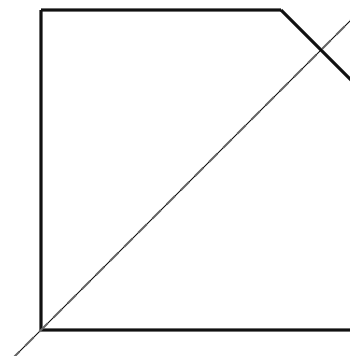


- 2** This slanted tile has opposite sides that match in length. Does it have a line of symmetry? Explain.

**CHALLENGE** One step up

A corner was cut from this square. Test the dashed diagonal. Is it a line of symmetry? Explain by matching edges.

WORK SPACE AND ANSWER



Students may trace and fold a spare paper copy to check. Keep this teacher key separate. Judge exact matching halves, not just equal areas. The cut-corner figure is explicitly drawn with equal cuts along adjacent sides, so its shown diagonal remains a symmetry line. Accept accurate descriptions in informal language.

PRACTICE 1

Yes. The top and bottom halves match exactly.

PRACTICE 2

No. In this non-square rectangle, the long and short edges do not match after this diagonal fold.

PRACTICE 3

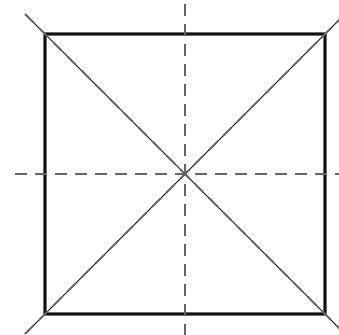
Yes. The equal sloping sides and the two halves of the base match.

PRACTICE 4

No. The two sloping sides have different lengths, so the halves do not match.

APPLY IT 1

4 lines: vertical, horizontal and both diagonals.
Check that each line would match both halves exactly.

**APPLY IT 2**

No. No fold matches its edges and corners; equal opposite sides do not guarantee reflection symmetry. Turning the tile halfway around would match it, but turning is different from folding.

CHALLENGE

Yes. The two long edges match each other, the two short edges match, and the cut edge folds onto itself.