

Line symmetry – finding lines of symmetry

WHAT THIS LESSON TEACHES

A line of symmetry splits a shape into two halves that match exactly, like a mirror or a fold. If you fold along the line and both halves land right on top of each other, it is a line of symmetry.

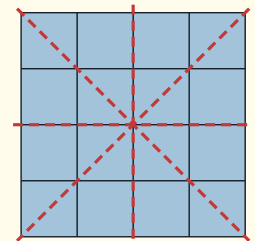
→ A square folded corner to corner makes two halves that match, so that fold is a line of symmetry.

→ The letter X folds straight down the middle and both halves match, but the letter S has no fold that matches.

MODEL THIS ON THE BOARD

LINES OF SYMMETRY OF A SQUARE

- 1 The dashed line down the middle matches both halves, so that is **1** line of symmetry.
- 2 The dashed line across the middle also matches, so that is **2**.
- 3 Fold along each diagonal and the halves match too, so a square has **4** lines of symmetry in all.



DISCUSSION STARTER

REFLECT Did folding or using a mirror help you find lines of symmetry more easily?

ANSWER KEY

Scaffold: visual check on the page

Q1: 3

a) **Always** — Two mid-lines and two diagonals all fold the square onto itself.

b) **Never** — Only the two mid-lines work; the diagonals do not match the halves.

c) **Sometimes** — Isosceles and equilateral yes; a scalene triangle has none.

d) **Never** — Every diameter is a line of symmetry — there are infinitely many.

EXTENSION SHEET · STRETCH ANSWERS

S1: rotation

S2: reflection

S3: rotation

S4: translation

S5: rotation