Aksum Math

Name: _____

Lines of Symmetry

Date: _____

Geometry · Grade 4

Score: _____ / 10

◆ Medium · 10 Questions

Solve each problem. Show your work in the space provided. Write your answer on the line.

1. Which capital letters have both horizontal AND vertical lines of symmetry?

H, I, O, X

Answer: _____

2. How many lines of symmetry does an isosceles triangle have?

Answer: _____

3. Does a rhombus have line symmetry?

How many lines?

Answer: _____

4. How many lines of symmetry does the letter X have?

Answer: _____

5. A regular polygon has 8 lines of symmetry.

How many sides does it have?

Answer: _____

6. Does a scalene triangle have any symmetry?

Answer: _____

7. How many lines of symmetry does the letter T have?

Answer: _____

8. How many lines of symmetry does the letter B have?

Answer: _____

9. Does the letter N have a line of symmetry?

Answer: _____

10. How many lines of symmetry does a regular heptagon (7 sides) have?

Answer: _____

Answer Key Lines of Symmetry — Medium

1. **H, I, O, X all have both horizontal and vertical symmetry.**
   H, I, O, and X each have a vertical line and a horizontal line of symmetry.

2. **1 (through the apex and midpoint of the base).**
   An isosceles triangle (two equal sides) has exactly 1 line of symmetry: the perpendicular bisector of its base.

3. **Yes, 2 lines of symmetry (both diagonals).**
   A rhombus has 2 lines of symmetry along its diagonals. Note: it has NO horizontal/vertical line of symmetry unless it is a square.

4. **4 (vertical, horizontal, and two diagonals).**
   The letter X has 4 lines of symmetry if formed with equal crossing lines.

5. **8 sides (regular octagon).**
   A regular n-gon has exactly n lines of symmetry. So 8 lines → 8 sides.

6. **No — a scalene triangle has no line symmetry and no rotational symmetry (other than 360°).**
   All sides and angles of a scalene triangle are different, so no fold or rotation maps it onto itself.

7. **1 (vertical)**
   T can be folded along a vertical line down the middle.

8. **1 (horizontal)**
   B can be folded along a horizontal line through its middle.

9. **No**
   N has rotational symmetry (180°) but no line of symmetry.

10. **7**

A regular n-gon has n lines of symmetry.