

Grade 4 Math Worksheet: **Symmetry & Reflections** : Difficulty Level - Intermediate

Symmetry & Reflections Worksheet (Intermediate Level)

Name: _____ Date: _____

Instructions: Complete each section thoughtfully and check your work as you go.

Part 1: Analyzing Symmetry

1. Lines of Symmetry Count

Write how many lines of symmetry each shape has:

- Pentagon: _____
- Hexagon: _____
- Equilateral triangle: _____
- Regular octagon: _____

2. Draw All Possible Lines of Symmetry

Draw all the lines of symmetry on the shapes below:

- A hexagon
 - A regular pentagon
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Part 2: Symmetry in Real Life

3. Symmetry Check

Write **True** or **False** for each statement:

- A butterfly has horizontal symmetry. _____
- A tree always has vertical symmetry. _____
- A soccer ball has more than one line of symmetry. _____
- A pencil has symmetry when viewed from the side. _____

4. Identify Symmetrical Objects

Circle the objects that have symmetry:

- Scissors
 - Chair
 - Clock
 - Triangle flag
 - Spoon
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Part 3: Drawing and Completing

5. Complete the Symmetrical Drawing

The right half of a design is shown below. Complete the left half to make it symmetrical:

! [Half of a design, such as a flower or geometric pattern]

6. Mirror Image Drawing

Draw the mirror image of the shapes across the vertical line:

! [Two shapes (e.g., a triangle and a star) placed next to a vertical line]

Part 4: Reflections on Grid Paper

7. Draw Reflected Shapes

Draw the reflection of each shape shown below over the dotted line:

! [Grid with simple shapes like rectangles and L-shapes on one side]

8. Choose the Correct Reflection

Circle the shape that shows the correct reflection of the original:

! [An original shape with three possible mirror images, only one correct]

Part 5: Symmetry in Nature and Art

9. Examples from Nature

List 2 examples of symmetry you find in nature and describe their type of symmetry (vertical, horizontal, or both):

- Example 1: _____ (Type: _____)
- Example 2: _____ (Type: _____)

10. Create Your Own Symmetrical Design

Draw a unique pattern or shape in the space below and ensure it has at least one

line of symmetry:
[Box with a vertical line down the center]

Challenge:

Fold a piece of paper in half and cut out a shape along the fold. Open the paper to reveal your symmetrical design!

Excellent job! Review your answers and discuss your findings with a friend or teacher.

— BE CHAMPION—