

Name: \_\_\_\_\_

Period: \_\_\_\_\_

## Symmetries and Diagonals of Quadrilaterals

A polygon is a closed shape made up of several straight-line segments that are joined together. The sides do not cross each other and exactly two sides meet at every vertex.

**Reflectional Symmetry** - A shape has reflectional symmetry if there is a line that reflects a figure onto itself.

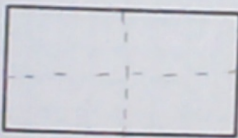
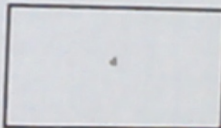
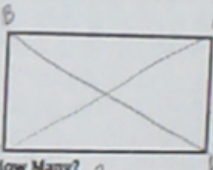
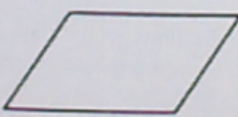
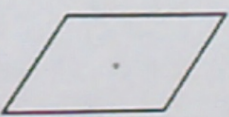
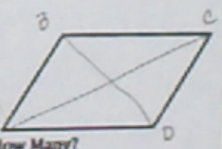
Draw all of the lines of reflection on the shapes below. Say how many lines of reflection there are.

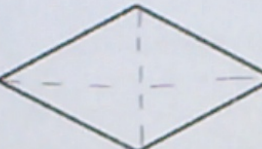

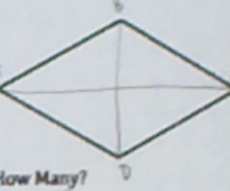
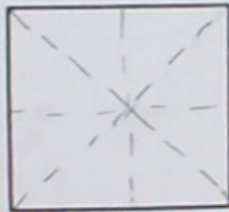
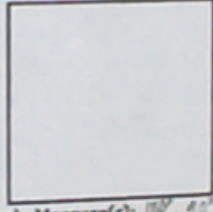
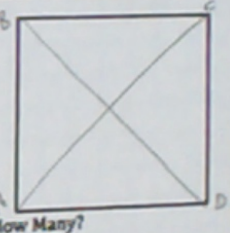
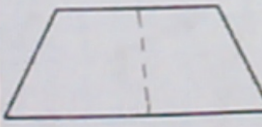
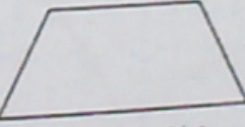

**Rotational Symmetry** - If a figure can be rotated onto itself by a rotation, it is said to have rotational symmetry.

Draw the point(s) and write angle measure(s) that would rotate each figure below onto itself.

**Diagonals** - Lines that connect all non-adjacent vertices of a polygon.

Draw all of the diagonals for each figure below. Say how many diagonals there are.

<p>A rectangle is a quadrilateral that contains four right angles.</p>	 <p>How Many? 2</p>	 <p>Angle Measure(s): 180° around center point</p>	 <p>How Many? 2</p>
<p>A parallelogram is a quadrilateral in which opposite sides are parallel.</p>	 <p>How Many? None</p>	 <p>Angle Measure(s): 180° around center point</p>	 <p>How Many?</p>

<p>A rhombus is a quadrilateral in which all sides are congruent (the same length)</p>	 <p>How Many? 2</p>	 <p>Angle Measure(s): 180° around center point</p>	 <p>How Many? 2</p>
<p>A square is both a rectangle and a rhombus. It has 4 right angles and 4 congruent sides.</p>	 <p>How Many? 4</p>	 <p>Angle Measure(s): 180°, 90°, 270° around center point</p>	 <p>How Many?</p>
<p>A trapezoid is a quadrilateral with one pair of opposite sides parallel.</p>	 <p>How Many? 1</p>	 <p>Angle Measure(s): 360° around center</p>	 <p>How Many?</p>