

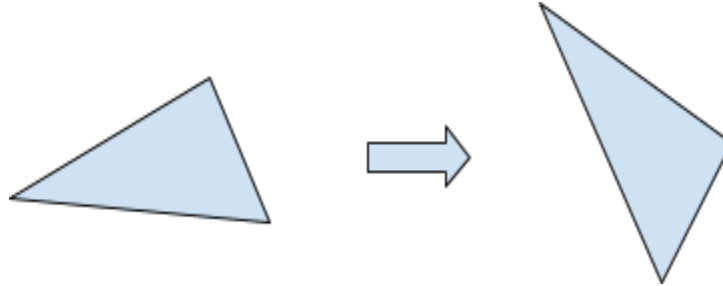
Transformation Vocabulary

Name: _____ Period: _____

Transformation:

- A transformation occurs when a shape changes *size*, *location*, or *orientation*
- The original figure prior to a transformation is called the **pre-image**
- The result of a transformation is called the **image**

Notation:



Rigid Transformations:

- A transformation where the pre-image and image are congruent
 - Two shapes are **congruent** if they are the exact same size; they have the same side lengths and the same angles

Type of Rigid Transformation:	Definition:	Sentence Structure:
Rotation	A rotation <i>turns</i> an entire figure about a fixed point. To rotate a figure you must choose a point of rotation, direction (either clockwise or counter clockwise), and angle of rotation (how far it will turn: 90°, 180°, 270°).	The pre-image was rotated (<u>degrees</u>) (<u>clockwise or counterclockwise</u>) about the origin. Ex:
Translation	A translation <i>slides</i> a figure horizontally (side-to-side), vertically (up or down), or both. To translate a figure, you must describe which direction you will move it, and how far it will slide.	The pre-image was translated (<u>number of units</u>) to the (<u>direction</u>). Ex:
Reflection	A reflection <i>flips</i> a figure across a line to form a mirror image. The mirror line is called a line of reflection . If you were to fold along the line of reflection, the pre-image and image would coincide (lie	The pre-image was reflected across the (<u>line</u>). Ex:

	directly on top of each other).	
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Type of Non-Rigid Transformation:	Definition:	Sentence Structure:
Dilation	<p>A dilation produces an image that is the same shape as the original, but is a different size. A dilation stretches or shrinks the original figure.</p> <p>Scale Factor: The ratio that describes how two lengths are related. If a scale factor is:</p> <ul style="list-style-type: none"> • Greater than 1, it <i>enlarges</i> a shape (makes it bigger) • Between 0 and 1 <i>reduces</i> a shape (makes it smaller) • Is equal to 1 then the two shapes are congruent 	<p>The pre-image was dilated by the scale factor (<u>amount</u>).</p> <p>Ex:</p>