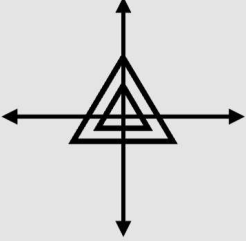
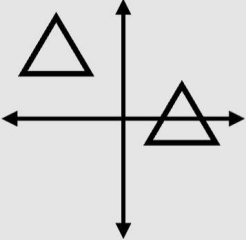
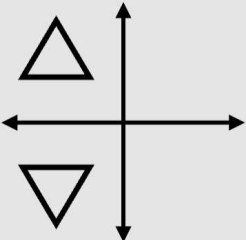
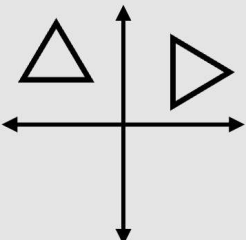


# TRANSFORMATIONS RULES

## Graphic Organizer

<p><b>DILATIONS</b></p> 	<p>A <u>DILATION</u> GETS BIGGER/SMALLER BY <i>MULTIPLYING</i> BY THE SCALE FACTOR.</p>			
	<p><u>DILATION RULE</u></p> <p><math>(SF * x, SF * y)</math></p>		<p>SCALE FACTOR = <math>\frac{\text{new}}{\text{original}}</math></p> <p><small>New &amp; Original need to be corresponding sides or points.</small></p>	
	<p><u>ENLARGEMENT EXAMPLE</u></p> <p><math>(2x, 2y)</math></p> <p>The scale factor is 2, which is larger than 1, so the dilation is an enlargement.</p>		<p><u>REDUCTION EXAMPLE</u></p> <p><math>(\frac{1}{2}x, \frac{1}{2}y)</math></p> <p>The scale factor is <math>\frac{1}{2}</math>, which is smaller than 1, so the dilation is a reduction.</p>	
	<p>A <u>TRANSLATION</u> IS A SLIDE. THE FIGURE MOVES LEFT, RIGHT, UP OR DOWN DEPENDING ON IF YOU <i>ADD</i> OR <i>SUBTRACT</i> FROM THE X AND Y VALUES.</p>			
<p><b>TRANSLATIONS</b></p> 	<p><u>TRANSLATION RULE</u></p> <p><math>(x \pm a, y \pm b)</math></p>			
	<p><u>RIGHT</u></p> <p><math>(x + a, y)</math></p>	<p><u>LEFT</u></p> <p><math>(x - a, y)</math></p>	<p><u>UP</u></p> <p><math>(x, y + b)</math></p>	<p><u>DOWN</u></p> <p><math>(x, y - b)</math></p>
	<p>A <u>REFLECTION</u> IS A FLIP OF A FIGURE TO CREATE A MIRROR IMAGE.</p>			
<p><b>REFLECTIONS</b></p> 	<p><u>REFLECTION OVER X-AXIS</u></p> <p><math>(x, -y)</math></p>		<p><u>REFLECTION OVER Y-AXIS</u></p> <p><math>(-x, y)</math></p>	
	<p>A <u>ROTATION</u> IS A TURN OF A FIGURE ABOUT THE ORIGIN.</p>			
<p><b>ROTATIONS</b></p> 	<p><u>90° CW</u></p> <p><u>270° CCW</u></p> <p><math>(y, -x)</math></p>	<p><u>180° CW</u></p> <p><u>180° CCW</u></p> <p><math>(-x, -y)</math></p>	<p><u>270° CW</u></p> <p><u>90° CCW</u></p> <p><math>(-y, x)</math></p>	