

# 9-4 Notes

TYPES OF SYMMETRY	PICTURE
<p>A figure has <u>line</u> symmetry, or <u>reflectional</u> symmetry, if there is a reflection for which the figure has its own <u>image</u>. The line is called a <u>line of symmetry</u>. It divides the figure into <u>halves</u>.</p>	
<p>A figure has <u>rotational</u> symmetry if there is a rotation of <math>180^\circ</math> or LESS where you can turn a figure and map it onto itself. The <u>degree</u> of <u>rotation</u> is the smallest <u>degree</u> needed for the figure to <u>map</u> onto itself.</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><math>360 \div 3 = 120</math> degree of rot. = <math>120^\circ</math></p> </div> <div style="text-align: center;"> <p><math>360 \div 6 = 60</math> degree of rot. = <math>60^\circ</math></p> </div> </div>
<p><u>Point</u> <u>symmetry</u> is a figure that can be rotated <math>180^\circ</math> to map it back onto itself. Each <u>segment</u> joining a point and its <u>image</u> rotation image passes through the <u>point</u> of rotation.</p> <p>A shape can have <u>both</u> rotational and point symmetry if it can be rotated <math>180^\circ</math> back onto itself, but could also be rotated less than <math>180^\circ</math>, like a square.</p>	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;"> <p>pt. of rotation</p> </div> <div style="text-align: center;"> <p>pt. of rotation</p> </div> </div> <div style="display: flex; justify-content: space-around; width: 100%; margin-top: 20px;"> <div style="text-align: center;"> <p>pt. of rotation</p> </div> <div style="text-align: center;"> <p>point <u>AND</u> rotational symmetry</p> </div> </div> </div>