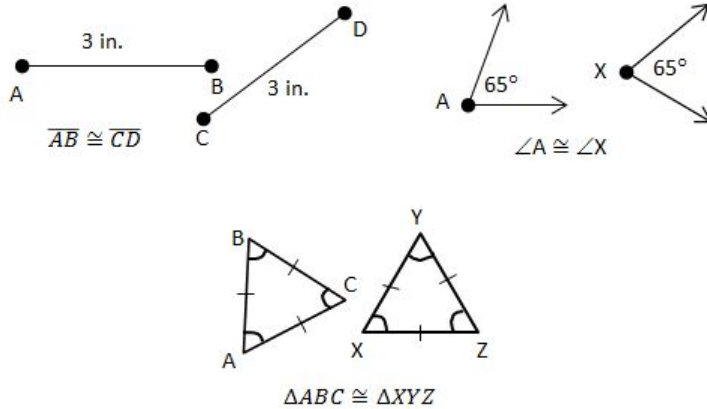


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Strand: Measurement and Geometry	
6.9 The student will determine congruence of segments, angles, and polygons.	
Suggested Pacing	
Related Standards	
Spiral Down: 4th Grade: <ul style="list-style-type: none"> • SOL 4.10 a • SOL 4.11 5th Grade: <ul style="list-style-type: none"> • SOL 5.12 • SOL 5.13 	Spiral Up: 8th Grade: <ul style="list-style-type: none"> • SOL 8.5
Essential Questions	Common Misconceptions
<ul style="list-style-type: none"> • What types of angles exist in Geometry? • How can the measure of the segments of triangles be applied to real world situations? • How can you justify that two triangles are congruent? • How do the properties of lines and angles contribute to geometric understanding? • What role do lines and angles play in interpreting the world around us? 	<ul style="list-style-type: none"> • Congruent Angles & Segments: students get confused when the angles are within a polygon and not stand alone
Understanding the Standard	Essential Knowledge and Skills
<ul style="list-style-type: none"> • The symbol for congruency is \cong. • Congruent figures have exactly the same size and the same shape. Line segments are congruent if they have the same length. Angles are congruent if they have the same measure. Congruent polygons have an equal number of sides, and all the corresponding sides and angles are congruent. -Examples:	<ul style="list-style-type: none"> • Identify regular polygons. • Draw lines of symmetry to divide regular polygons into two congruent parts. • Determine the congruence of segments, angles, and polygons given their properties. • Determine whether polygons are congruent or non-congruent according to the measures of their sides and angles.

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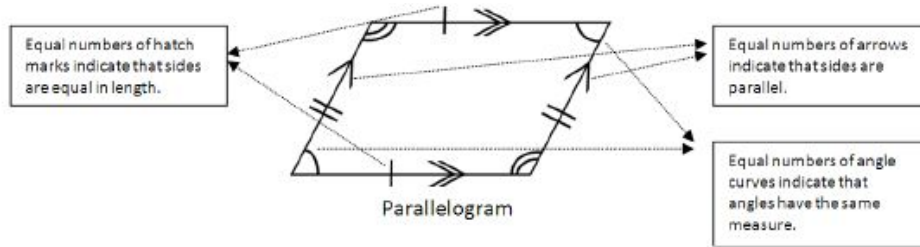


- A polygon is a closed plane figure composed of at least three line segments that do not cross.
- A regular polygon has congruent sides and congruent interior angles.
- The number of lines of symmetry of a regular polygon is equal to the number of sides of the polygon.
- A line of symmetry divides a figure into two congruent parts, each of which is the mirror image of the other. Lines of symmetry are not limited to horizontal and vertical lines.
- Noncongruent figures may have the same shape but not the same size.
- Students should be familiar with geometric markings in figures to indicate congruence of sides and angles and to indicate parallel sides. An equal number of hatch (hash) marks indicate that those sides are equal in length. An equal number of arrows indicate that those sides are parallel. An equal number of angle curves indicate that those angles have the same measure. See the diagram below.

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- The determination of the congruence or non-congruence of two figures can be accomplished by placing one figure on top of the other or by comparing the measurements of all corresponding sides and angles.
- Construction of congruent line segments, angles, and polygons helps students understand congruency.

Vocabulary			Instructional Activities Organized by Learning Objective									
SOL 6.9 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Congruent/ Congruency</td> <td style="width: 33%;">Segment</td> <td style="width: 33%;">Angle</td> </tr> <tr> <td>Polygon</td> <td>Regular Polygon</td> <td>Line of Symmetry</td> </tr> <tr> <td>Non-congruent</td> <td>Geometric Markings</td> <td></td> </tr> </table>			Congruent/ Congruency	Segment	Angle	Polygon	Regular Polygon	Line of Symmetry	Non-congruent	Geometric Markings		Textbook Notes Resources <ul style="list-style-type: none"> • Print • Technology-based
Congruent/ Congruency	Segment	Angle										
Polygon	Regular Polygon	Line of Symmetry										
Non-congruent	Geometric Markings											
Assessment			Station Activities									

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Cross-Curricular Connections

Tiered Differentiations