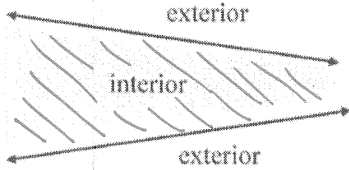
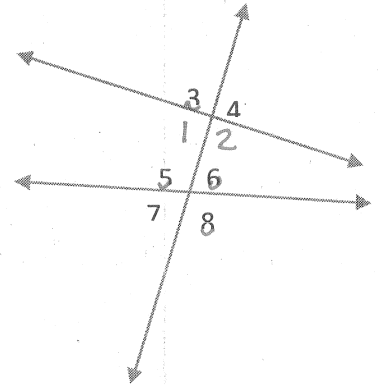


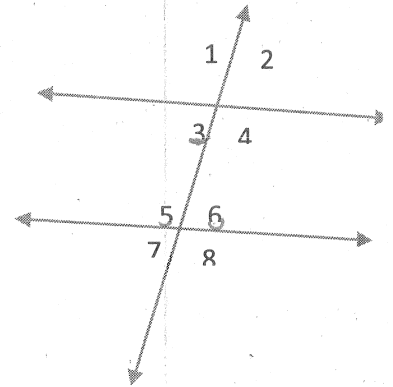
# H. Geometry – Chapter 2 – Definition Sheet

## Section 2.6

<p>Pairs of Coplanar Lines</p>	
<p><u>Definitions of:</u> <u>Transversal</u></p>	<p>-A line that intersects 2 other lines -Forms <u>8</u> angles with special names</p>
<p><u>Corresponding Angles</u></p>	<p>-Angles in same position with respect to the intersection. Points Examples: <math>\angle 3</math> and <math>\angle 5</math>      <math>\angle 4</math> and <math>\angle 6</math> <math>\angle 1</math> and <math>\angle 7</math>      <math>\angle 2</math> and <math>\angle 8</math></p>
<p><u>Alternate Interior Angles (AIA)</u></p>	<p>-Interior angles on opposite sides of the transversal. Examples: <math>\angle 2</math> and <math>\angle 5</math> <math>\angle 1</math> and <math>\angle 6</math></p>
<p><u>Alternate Exterior Angles (AEA)</u></p>	<p>-Exterior angles on opposite sides of the transversal. Examples: <math>\angle 2</math> and <math>\angle 7</math> <math>\angle 3</math> and <math>\angle 8</math></p>
<p><u>Same-side Interior Angles (SSIA)</u></p>	<p>-Interior angles on the same side of the transversal. Examples: <math>\angle 1</math> and <math>\angle 5</math> <math>\angle 2</math> and <math>\angle 6</math></p>
<p><u>Same-side Exterior Angles (SSEA)</u></p>	<p>-Exterior angles on the same side of the transversal. Example: <math>\angle 3</math> and <math>\angle 7</math> <math>\angle 4</math> and <math>\angle 8</math></p>



# H. Geometry – Chapter 2 – Definition Sheet



Parallel Lines Conjectures	
<p><u>Corresponding Angles Postulate</u> (CA Postulate)</p>	<p>-If parallel lines are cut by a transversal, then the corresponding angles are <u>congruent</u>.</p> <p>-Examples: <math>\angle 1</math> and <math>\angle 5</math>  <math>\angle 3</math> and <math>\angle 7</math>  <math>\angle 2</math> and <math>\angle 6</math>  <math>\angle 4</math> and <math>\angle 8</math></p>
<p><u>Alternate Interior Angles Theorem</u> (AIA Theorem)</p>	<p>-If parallel lines are cut by a transversal, then the Alternate interior angles are <u>congruent</u>.</p> <p>Examples: <math>\angle 3</math> and <math>\angle 6</math>  <math>\angle 4</math> and <math>\angle 5</math></p>
<p><u>Alternate Exterior Angles Theorem</u> (AEA Theorem)</p>	<p>-If parallel lines are cut by a transversal, then the alternate exterior angles are <u>congruent</u>.</p> <p>Examples: <math>\angle 2</math> and <math>\angle 7</math>  <math>\angle 1</math> and <math>\angle 8</math></p>
<p><u>Same-Side Interior Angles Theorem</u> (SSIA Theorem)</p>	<p>-If parallel lines are cut by a transversal, then the same side interior angles are <u>supplementary</u>.</p> <p>Examples: <math>\angle 3</math> and <math>\angle 5</math>  <math>\angle 4</math> and <math>\angle 6</math></p>
<p><u>Same-Side Exterior Angles Theorem</u> (SSEA Theorem)</p>	<p>-If parallel lines are cut by a transversal, then the same side exterior angles are <u>supplementary</u>.</p> <p>Examples: <math>\angle 2</math> and <math>\angle 8</math>  <math>\angle 1</math> and <math>\angle 7</math></p>
<b>When two lines are cut by a transversal:</b>	
Corresponding Angles Converse Postulate	-If the corresponding angles are <u><math>\cong</math></u> , then the lines are <u><math>\parallel</math></u> .
AIA Converse Theorem	-If the alternate interior angles are <u><math>\cong</math></u> , then the lines are <u><math>\parallel</math></u> .
AEA Converse Theorem	-If the alternate exterior angles are <u><math>\cong</math></u> , then the lines are <u><math>\parallel</math></u> .
SSIA Converse Theorem	-If the same side interior angles are <u>supp.</u> , then the lines are <u><math>\parallel</math></u> .
SSEA Converse Theorem	-If the same side exterior angles are <u>supp.</u> , then the lines are <u><math>\parallel</math></u> .