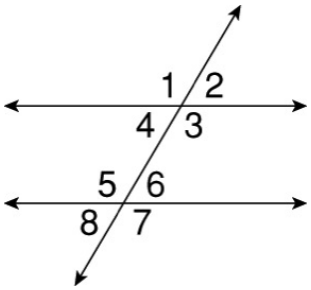
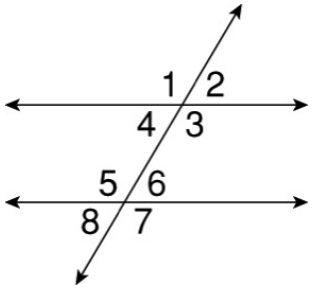
11.1 Parallel Lines Cut by a Transversal

Essential Question: What can you conclude about the angles formed by parallel lines that are cut by a transversal?

Learning Goal: Students will be able to use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. MAFS.8.G.1.5

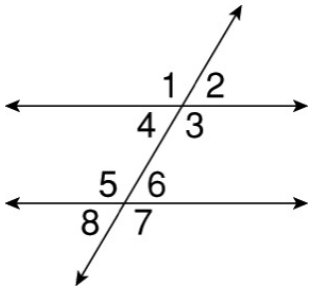
Questions:	Notes:
	Parallel Lines and Transversal A transversal is a line that intersects two lines in the same plane at two different points. **Corresponding angles** are angles that lay on the same side of the transversal and on the same side of the two parallel lines.  ∠1 and ∠5 are one pair of corresponding angles. ∠2 and ∠6 are a second pair of corresponding angles. ∠3 and ∠7 are a third pair of corresponding angles. ∠4 and ∠8 are a fourth pair of corresponding angles.

Alternate interior angles are not adjacent angles and are between the parallel lines.



∠3 and ∠5 are one pair of alternate interior angles.
∠4 and ∠6 are another pair of alternate interior angles.

Alternate exterior angles are not adjacent angles and are outside the parallel lines.



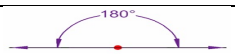
∠1 and ∠7 are one pair of alternate exterior angles.

∠2 and ∠8 are another pair of alternate exterior angles.

Same-side Interior Angles lie on the same side of the transversal between the two parallel lines.

∠4 and ∠5 are one pair of same-side interior angles.

∠3 and ∠6 are one pair of same-side interior angles.

	 A straight angle measures 180°. M∠ means the measure of an angle. ∠ is the symbol for angle.