Objective: In this lesson, you will prove theorems about lines and angles.

**Parallel Lines and Transversals**

Transversal -

Parallel lines $r$ and $s$ are cut by transversal $t$.

List the following angles:

- **Corresponding angles**:

- **Interior angles**:

- **Exterior angles**:

- **Alternate interior angles**:

- **Alternate exterior angles**:

- **Same-side interior angles**:
Geometry A
Unit 2 – Proving Theorems about Lines and Angles

- Alternate Interior Angles Theorem—
- Alternate Exterior Angles Theorem—
- Same-Side Interior Angles Theorem—

Perpendicular Bisectors

The perpendicular bisector of $\overline{AB}$ is defined as

---

[Diagram showing a coordinate plane with points A, B, C, D, E, and a perpendicular bisector line]

---
Any point on the perpendicular bisector of a line segment is ________________________________
__________________________________________________________________________________

Perpendicular Bisector Theorem—_____________________________________________________
__________________________________________________________________________________

Converse to the Perpendicular Bisector Theorem—_______________________________________
__________________________________________________________________________________

Points that lie on the perpendicular bisector of a line segment are equidistant from the endpoints of the line segment.
In this lesson, you studied four important theorems involving lines and angles:

<table>
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<tr>
<th>Theorem</th>
<th>Statement</th>
<th>Example (see diagram)</th>
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