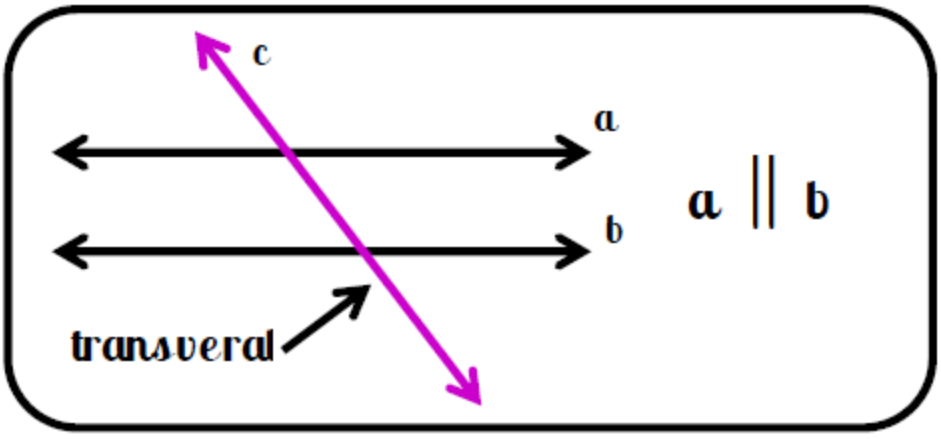
# Angles Formed by Parallel Lines
# Graphic Organizer/Reference (p.1)

**Properties of Parallel Lines:**

- Parallel lines are:
  - coplanar lines that will never intersect
  - the same distance apart along their entire length
  - represent by the symbol: ||

**Properties of Transversals:**

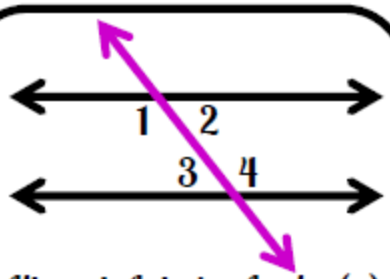
- A transversal is line that intersects two or more lines in a plane at different points.
- If a transversal is perpendicular to one parallel line in a pair, then it is perpendicular to both lines.



# Angles Formed by Parallel Lines
# Graphic Organizer/Reference (p.2)

**Alternate Interior Angles:**

• Alternate interior angles are a pair of congruent angles located inside of the parallel lines on opposite sides of the transversal.

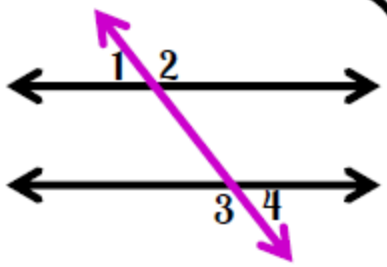



Alternate Interior Angles (≅)

∠1 and ∠4 , ∠2 and ∠3

**Alternate Exterior Angles:**

• Alternate exterior angles are a pair of congruent angles that are located outside of the parallel lines on opposite sides of the transversal.

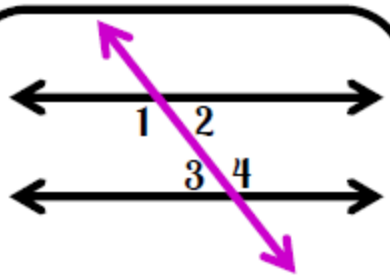



Alternate Exterior Angles (≅)

∠1 and ∠4 , ∠2 and ∠3

**Consecutive Interior Angles:**

• Consecutive interior angles are a pair of supplementary angles that are located inside of the parallel lines on the same side of the transversal.



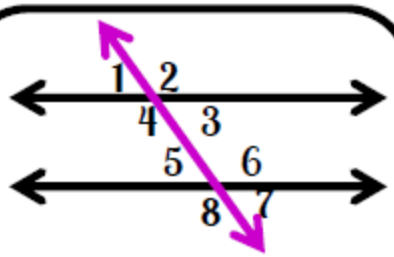

Consecutive Interior Angles (supp)

∠1 and ∠3 , ∠2 and ∠4

# Angles Formed by Parallel Lines
# Graphic Organizer/Reference (p.3)

**Corresponding Angles:**

• Corresponding angles are a pair of congruent angles that consist of one exterior and one interior angle in the same position on the same side of the transversal.



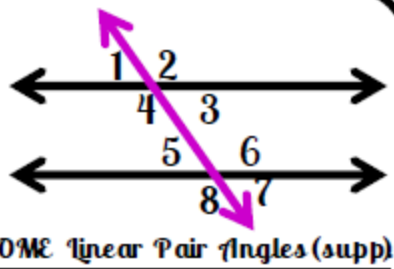

Corresponding Angles (≅)

∠1 and ∠5 , ∠2 and ∠6

∠4 and ∠8 , ∠3 and ∠7

**Linear Pair Angles:**

• Linear pair angles are a pair of supplementary adjacent angles whose non-common (non-shared) sides are opposite rays and who form a straight line.



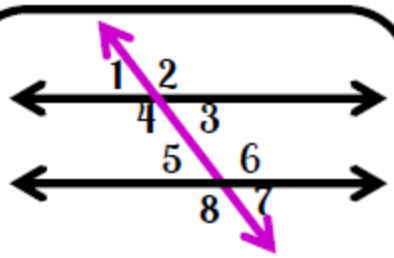

SOME Linear Pair Angles (supp)

∠1 and ∠2 , ∠2 and ∠3

∠5 and ∠8 , ∠8 and ∠7

**Vertical Angles:**

• Vertical angles are two congruent nonadjacent angles formed by two intersecting lines that share only a single point (the vertex).




Vertical Angles (≅)

∠1 and ∠3 , ∠2 and ∠4

∠5 and ∠7 , ∠6 and ∠8