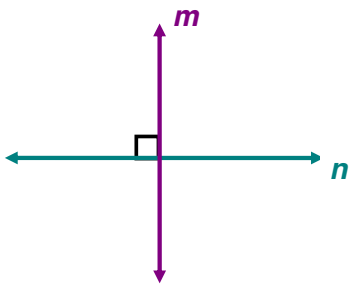
Perpendicular Lines

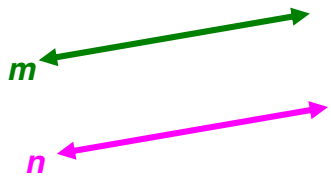
two lines that intersect to form a right angle



Line *m* is perpendicular to line *n.*
$m \perp n$

Parallel Lines

lines that do not intersect and are coplanar

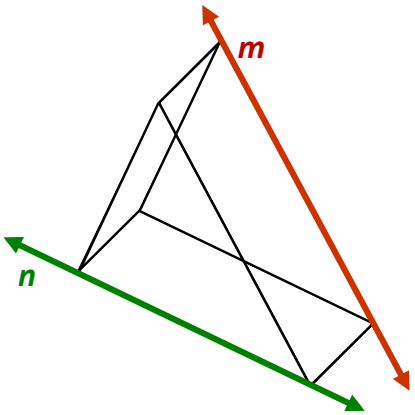


$m \| n$
Line *m* is parallel to line *n.*

Parallel lines have the same slope.

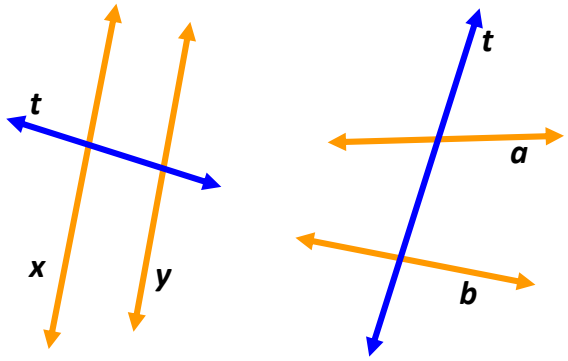
Skew Lines

lines that do not intersect and are not coplanar



Transversal

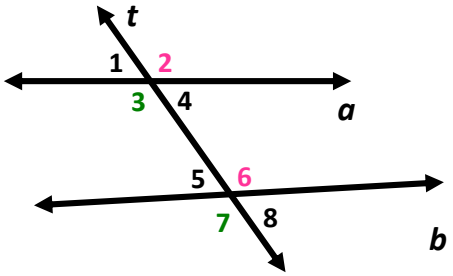
a line that intersects at least two other lines



Line *t* is a transversal.

Corresponding Angles

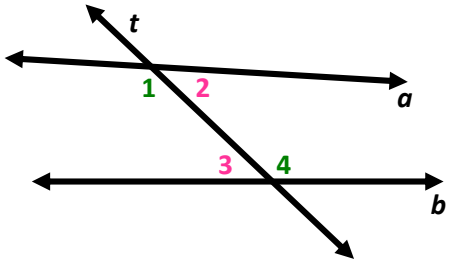
angles in matching positions when a transversal crosses at least two lines



Examples:
1) ∠2 and ∠6
2) ∠3 and ∠7

Alternate Interior Angles

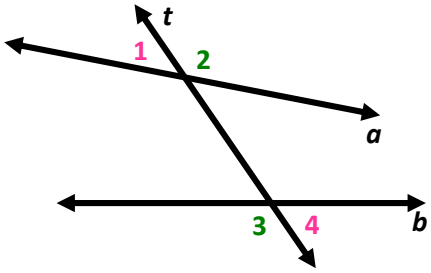
angles inside the lines and on opposite sides of the transversal



Examples:
1) ∠1 and ∠4
2) ∠2 and ∠3

Alternate Exterior Angles

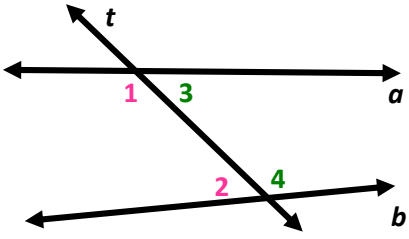
angles outside the two lines and on opposite sides of the transversal



Examples:
1) ∠1 and ∠4
2) ∠2 and ∠3

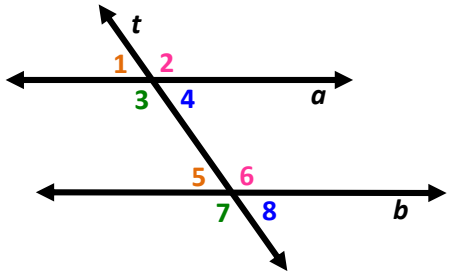
Consecutive Interior Angles

angles between the two lines and on the same side of the transversal



Examples:
1) ∠1 and ∠2
2) ∠3 and ∠4

Parallel Lines



Line *a* is parallel to line *b* when

Corresponding angles are congruent	$\angle 1 \cong \angle 5$, $\angle 2 \cong \angle 6$, $\angle 3 \cong \angle 7$, $\angle 4 \cong \angle 8$
Alternate interior angles are congruent	$\angle 3 \cong \angle 6$ $\angle 4 \cong \angle 5$
Alternate exterior angles are congruent	$\angle 1 \cong \angle 8$ $\angle 2 \cong \angle 7$
Consecutive interior angles are supplementary	$m\angle 3 + m\angle 5 = 180°$ $m\angle 4 + m\angle 6 = 180°$