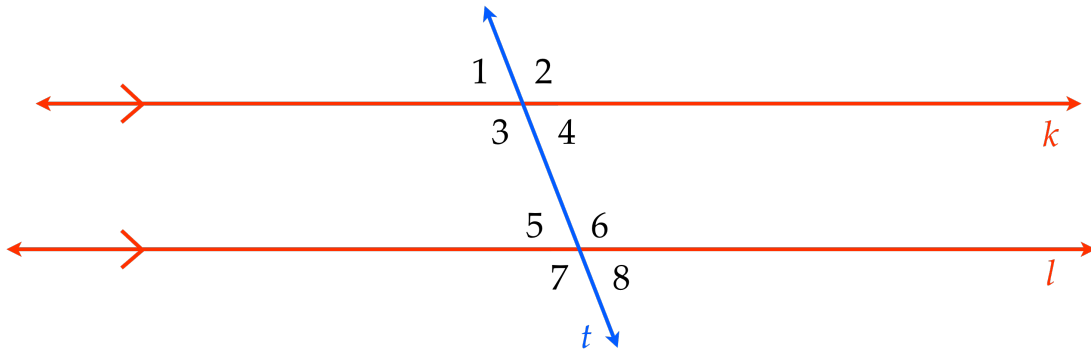
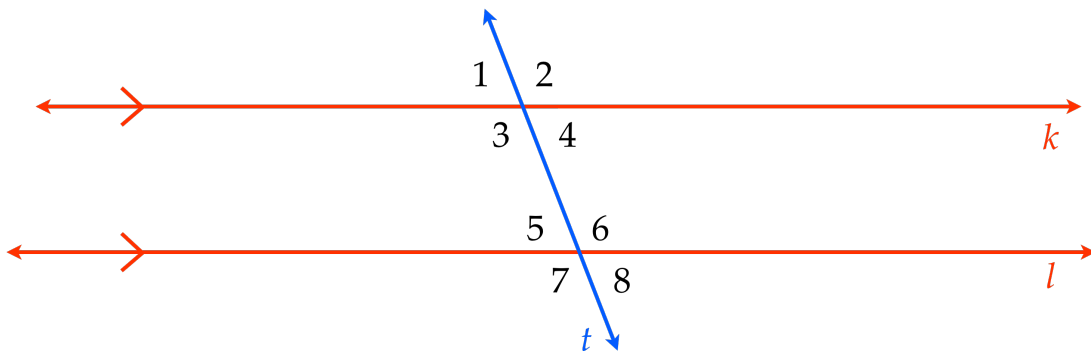


Given **two parallel lines**... with an intersecting **transversal**, line t
eight angles are created



Given **two parallel lines**... with an intersecting **transversal**, line t
eight angles are created

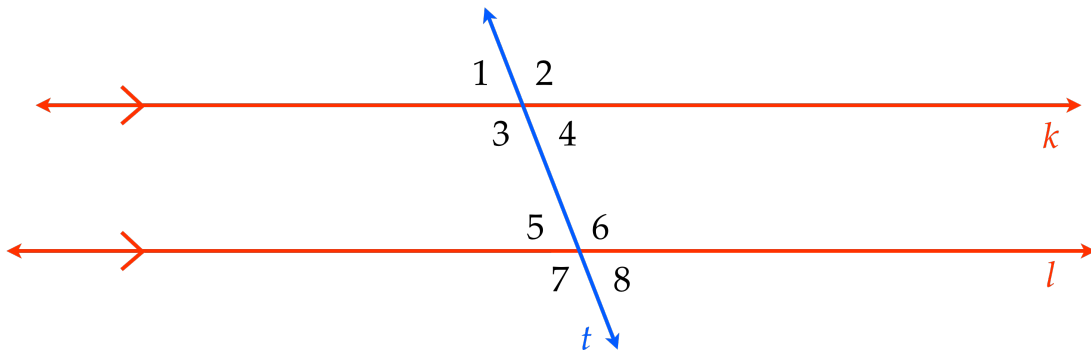


Corresponding Angles are angles at the same location at each intersection

$\angle 2$ and $\angle 6$ are corresponding angles	$\angle 1$ and $\angle 5$ are corresponding angles
$\angle 3$ and $\angle 7$ are corresponding angles	$\angle 4$ and $\angle 8$ are corresponding angles

Corresponding Angle Postulate

If two parallel lines are cut by a transversal, then each pair of **corresponding angles** is congruent.



Corresponding Angles are angles at the same location at each intersection

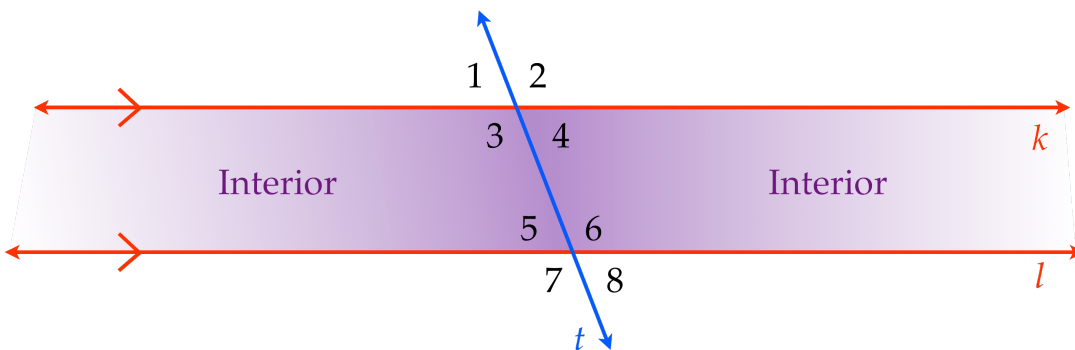
$$\angle 2 \cong \angle 6$$

$$\angle 1 \cong \angle 5$$

$$\angle 3 \cong \angle 7$$

$$\angle 4 \cong \angle 8$$

Given **two parallel lines**... with an intersecting **transversal**, line t
eight angles are created



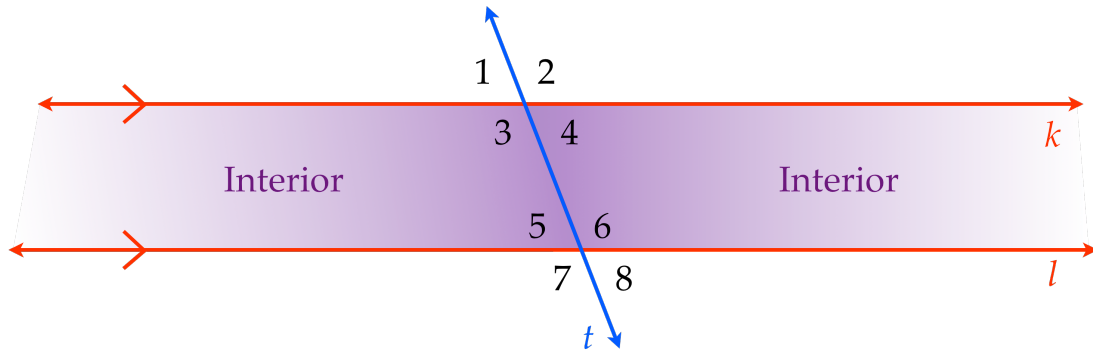
Alternate Interior Angles are **interior angles** on alternate sides of the transversal.

$\angle 3$ and $\angle 6$ are **alternate interior angles**

$\angle 4$ and $\angle 5$ are **alternate interior angles**

Alternate Interior Angles Theorem

If two parallel lines are cut by a transversal, then each pair of **alternate interior angles** is congruent.

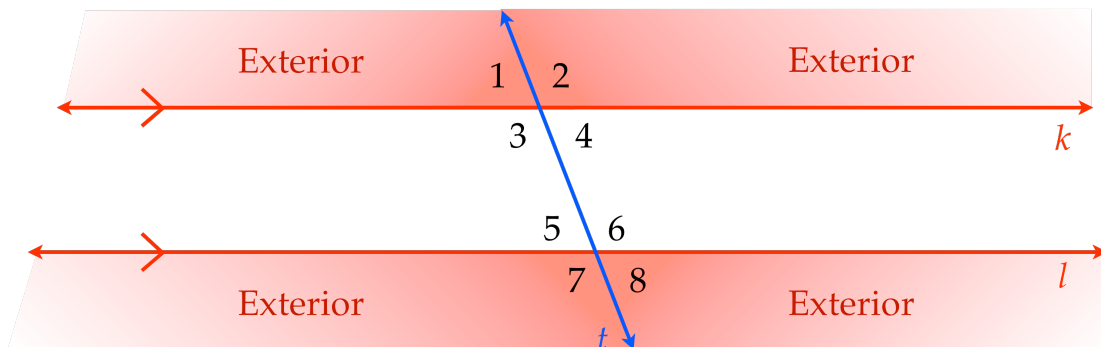


Alternate Interior Angles are **interior angles** on alternate sides of the transversal.

$$\angle 3 \cong \angle 6$$

$$\angle 4 \cong \angle 5$$

Given **two parallel lines**... with an intersecting **transversal**, line **t**
eight angles are created



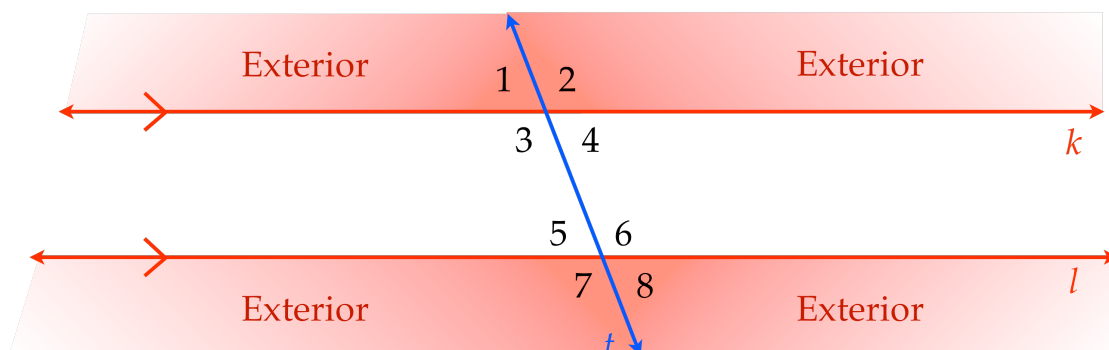
Alternate Exterior Angles are **exterior angles** on alternate sides of the transversal.

$\angle 2$ and $\angle 7$ are **alternate exterior angles**

$\angle 1$ and $\angle 8$ are **alternate exterior angles**

Alternate Exterior Angles Theorem

If two parallel lines are cut by a transversal,
then each pair of **alternate exterior angles** is congruent.

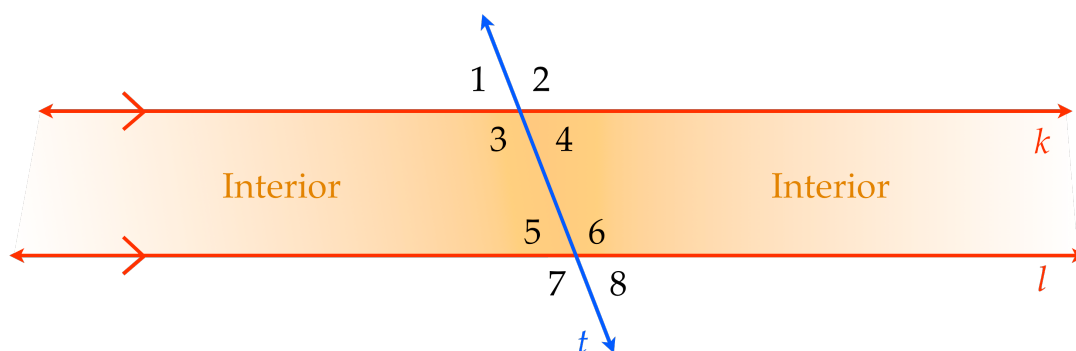


Alternate Exterior Angles are **exterior angles** on alternate sides of the transversal.

$$\angle 2 \cong \angle 7$$

$$\angle 1 \cong \angle 8$$

Given **two parallel lines**... with an intersecting **transversal**, line *t*
eight angles are created

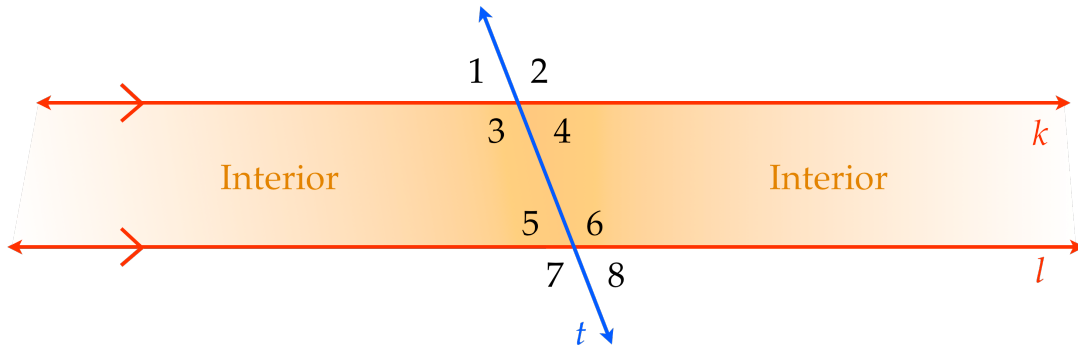


Same Side Interior angles are **interior angles** on the same side of the transversal.

$\angle 4$ and $\angle 6$ are **same side interior angles** $\angle 3$ and $\angle 5$ are **same side interior angles**

Same Side Interior Angles Theorem

If two parallel lines are cut by a transversal, then each pair of **same-side interior angles** is supplementary.



Same Side Interior angles are **interior angles** on the same side of the transversal.

$\angle 4$ and $\angle 6$ are **supplementary**

$\angle 3$ and $\angle 5$ are **supplementary**

Given **line a** is parallel to **line b** and **line l** is parallel to **line m**, what conclusions can be made about the following angles?

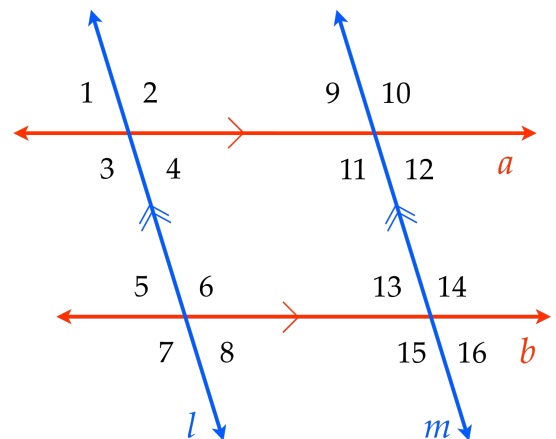
Give your reason.

$\angle 9$ and $\angle 13$

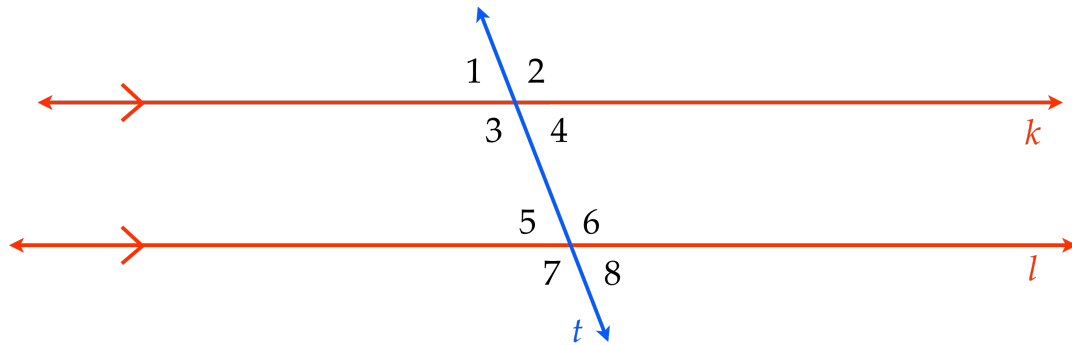
$\angle 6$ and $\angle 15$

$\angle 2$ and $\angle 7$

$\angle 4$ and $\angle 11$



Given two parallel lines... with an intersecting transversal, line t



Corresponding Angles are congruent
Alternate Interior Angles are congruent
Alternate Exterior Angles are congruent
Same Side Interior Angles are supplementary