

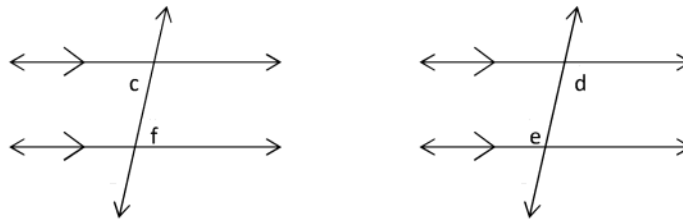
FoM11 Lesson 2.2

Monday, February 27, 2017 10:04 AM

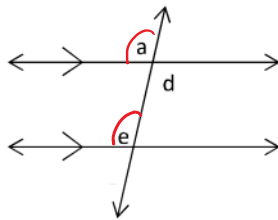
From last day we know that when a transversal crosses parallel lines, the corresponding angles are equal. There are two other sets of angles that have a relationship when a transversal crosses parallel lines.

Alternate Interior Angles

When a transversal intersects a pair of parallel lines, the **alternate interior angles** are equal.



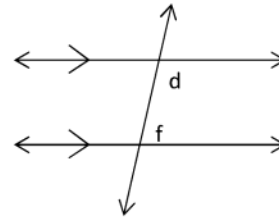
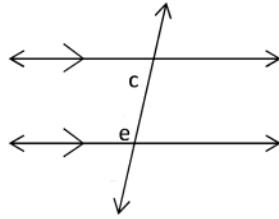
Proof:



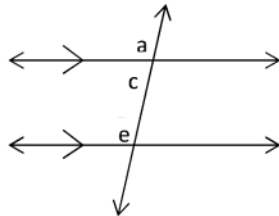
$\angle a = \angle e$ corresponding \angle 's
 $\angle a = \angle d$ vertically opposite \angle 's
 $\angle d = \angle e$ alternate interior \angle 's
 both = $\angle a$

Co-Interior Angles:

When a transversal intersects a pair of parallel lines, the **co-interior angles** are supplementary.



Proof:



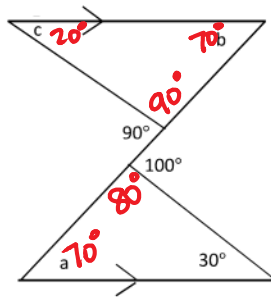
$\angle a = \angle e$ Corresponding \angle 's

$\angle a + \angle c = 180^\circ$ \angle 's on a line = 180°

$\angle e + \angle c = 180^\circ$ b/c $\angle e = \angle a$
(substitution)

$\therefore \angle e + \angle c$ are supplementary.

Example 1: Determine the measures of a , b and c .



$\angle a = 70^\circ$ \angle sum Δ

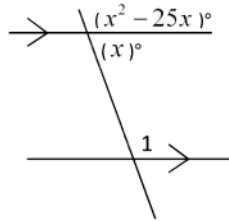
$\angle b = 70^\circ$ alternate interior \angle 's

$\angle c = 20^\circ$ \angle sum Δ

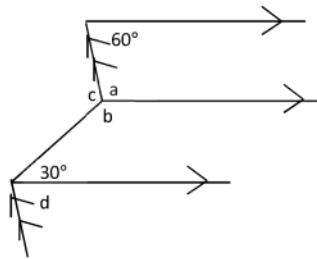


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Example 2: Find the measure of $\angle 1$.



Example 3: Determine the measures of a , b , c and d .



$\angle a = 120^\circ$ co-interior \angle 's
 $\angle b = 150^\circ$ \angle 's at point = 360°
 $\angle c = 90^\circ$ alternate interior \angle 's
 $\angle d = 60^\circ$ corresponding \angle 's



Assignment: pg. 78 #1-4, 10, 12, 13, 15, 16, 20

#1, 2 ac, 3 aceg, 4, 15, 16, 20a

* 10, 12, 20b (optional)