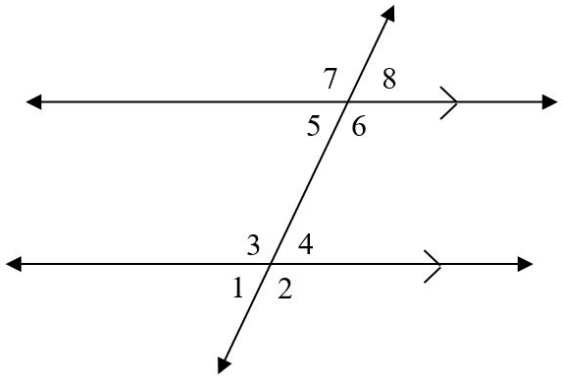
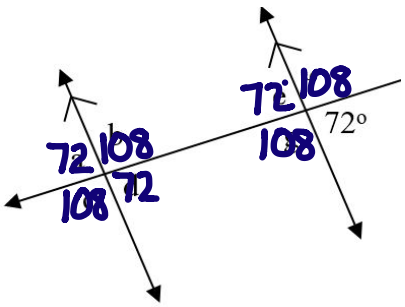
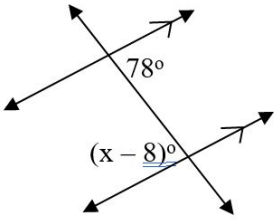
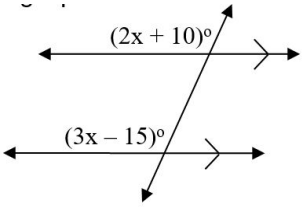
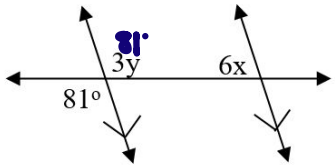
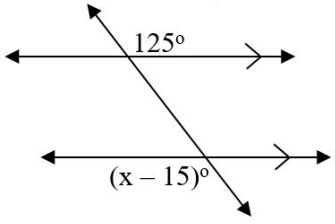
Name:_____Date:_____Period:____

9.1.1 NOTES: Angles Formed by Parallel Lines and Transversals



If two parallel lines are cut by a transversal, then by the …

Corresponding Angles Postulate	…corresponding angles are congruent. Angle Pairs: ∠8 and ∠4 ∠5 and ∠1 ∠7 and ∠3 ∠6 and ∠2
Alternate Interior Angles Theorem	…alt. int. angles are congruent. Angle Pairs: ∠5 and ∠4 ∠6 and ∠3
Alternate Exterior Angles Theorem	…alt. ext. angles are congruent. Angle Pairs: ∠7 and ∠2 ∠8 and ∠1
Same-Side Interior Angles Theorem	…same side int. angles are supplementary. Angle Pairs: ∠5 and ∠3 ∠6 and ∠4

Example 1  Find a, b, c, d, e, f, g, and name each angle pair.	a = 72° d = 72° g = 108° b = 108° e = 72° c = 108° f = 108°
Example 2 Solve for x and identify the angle pair  	$x-8=78$ $+8 \quad +8$ $x=86$ Alt. Int. angles
Example 3 Solve for x and identify the angle pair.  	$3x-15=2x+10$ $-2x \quad -2x$ $x-15=10$ $+15 \quad +15$ $x=25$ Corresponding angles
Example 4 Solve for x and y. Explain.  	$\frac{3y}{3}=\frac{81}{3}$ $y=27$ $6x+81=180$ $-81 \quad -81$ $\frac{6x}{6}=\frac{99}{6}$ $x=16.5$
Example 5 Solve for x and explain.  	$x-15=125$ $+15 \quad +15$ $x=140$