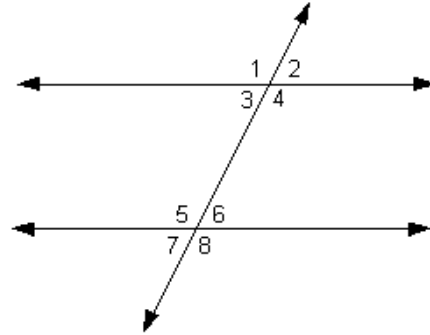# Geometry CC 1.9 – Parallel lines and transversals
Using the diagram to the right, identify the following:
1. Interior angles.

2. Exterior angles

3. Pairs of alternate interior angles

4. Pairs of alternate exterior angles

5. Pairs of corresponding angles

6. Pairs of same side interior angles

7. Pairs of same side exterior angles

If two parallel lines are cut by a transversal,
        the alternate interior angles are congruent.
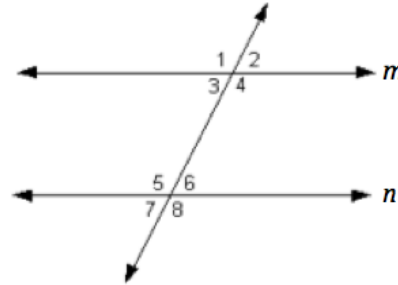   the alternate exterior angle are congruent.
        the corresponding angles are congruent.
        the same side interior angles are **s**upplementary, same side exterior angles are supplementary.
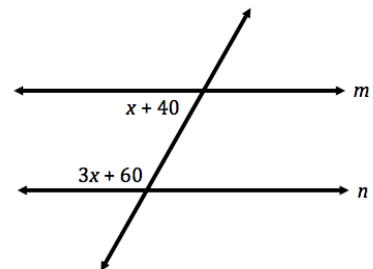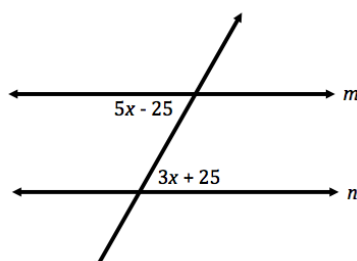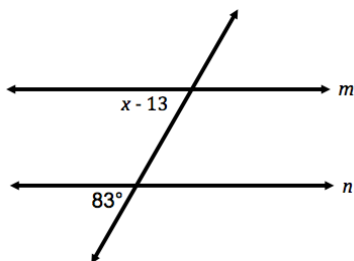

8. If $m \parallel n$ and $m\angle 1 = 150°$, find the measure of the remaining angles and provide your reasoning.

	Angle Measure	**Reasoning**
$m\angle 2$		
$m\angle 3$		
$m\angle 4$		
$m\angle 5$		
$m\angle 6$		
$m\angle 7$		
$m\angle 8$		

What did notice about all the angle measures in the above table?

9. If $m \parallel n$, find the value of x for the problems pictured below.

$x - 13$

$83°$
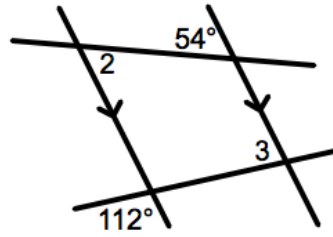
$5x - 25$

$3x + 25$

$x + 40$

$3x + 60$

Geometry CC 1.2 HW – Parallel lines and transversals

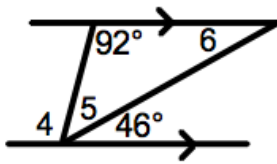Find the values of the missing (labeled) angles in each diagram below. Show all steps to your solutions.
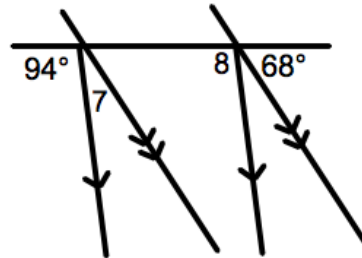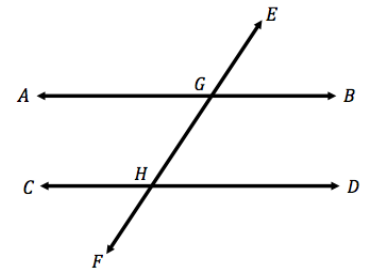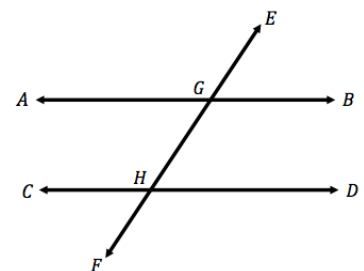
1.
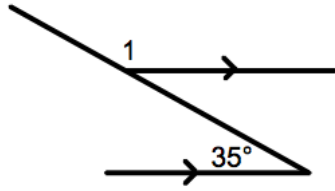
2.

3.

4.

In 5-7, AB||CD and are intersected by transversal EF at G and H.

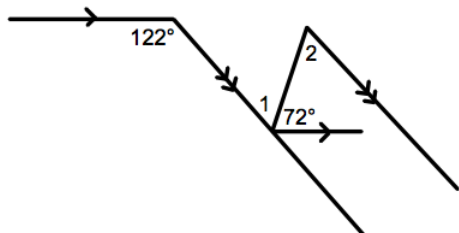5.   If $m\angle EGB = 40°$, find the remaining angles

6.   If $\angle AGH = x + 40$ and $\angle CHG = 3x + 60$, find x.

7.   If $\angle AGH = 5x - 25$ and $\angle DHG = 3x + 25$, find $\angle DHG$.

In 8-9, find the measure of the missing (labeled) angles. Show all work!

8.

9.