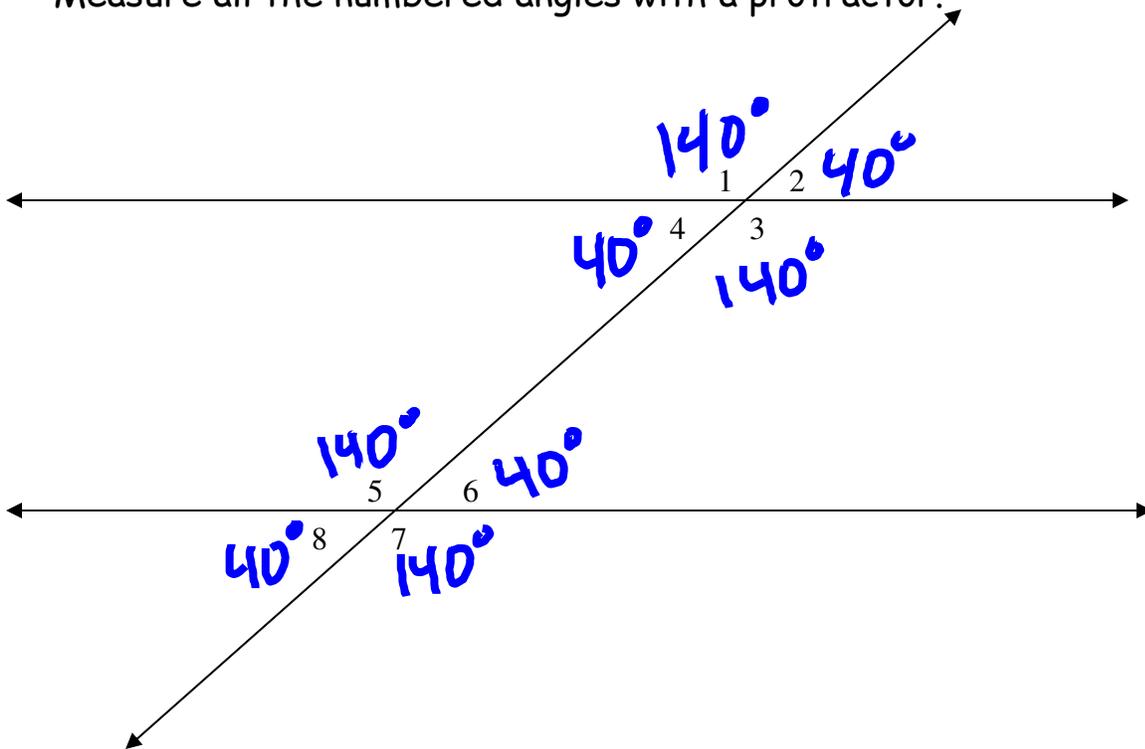Parallel Line Activity
Measure all the numbered angles with a protractor.

There are several special pairs of angles that share certain characteristics when two parallel lines are cut by a transversal.

Alternate interior angles: these are angles between the parallel lines but on opposite sides of the transversal. Name two pairs of alternate interior angles in the diagram above: ∠4+∠6   ∠3+∠5

What characteristic do you notice about these pairs?
Congruent

Same-side interior angles: these are angles between the parallel lines but on the same side of the transversal. Name two pairs of same-side interior angles in the diagram above: ∠4+∠5   ∠3+∠6

What characteristics do you notice about these pairs?
Supplementary

Corresponding angles: these are angles that are on the same side of the transversal where one is between the parallel lines and the other is outside the parallel lines. These angles are congruent. (ex. < 1 and < 5)
∠4+∠8   ∠2+∠6   ∠3+∠7
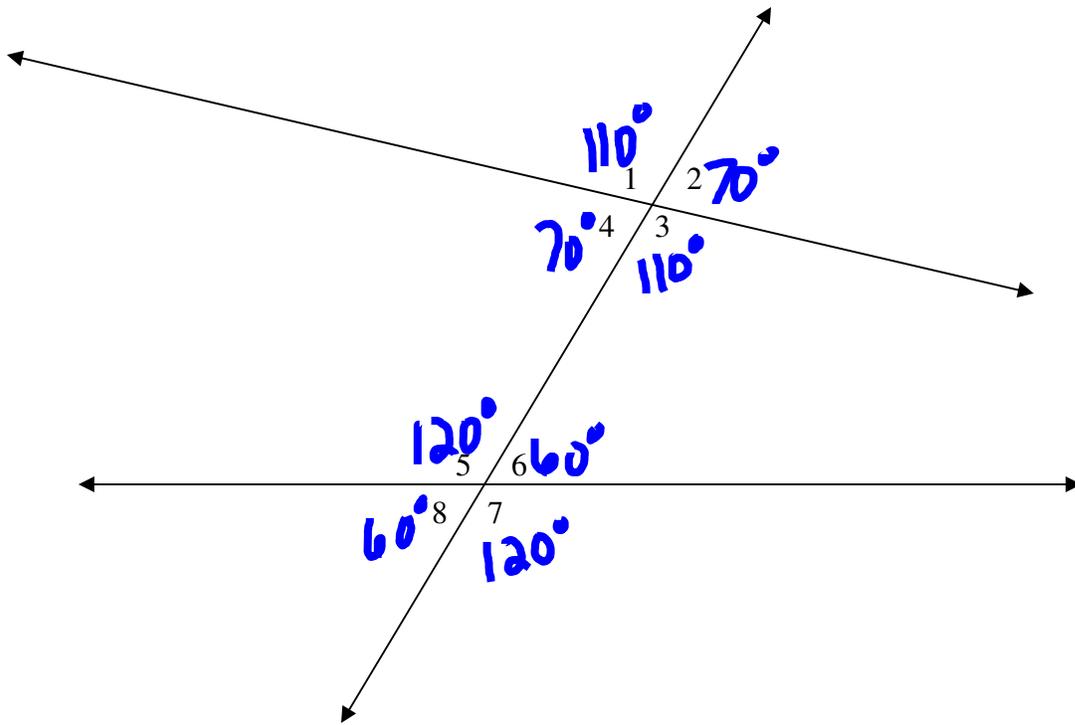Name the other three pairs of corresponding angles:
Congruent

Non-Parallel Line Activity
Measure all the numbered angles with a protractor.

110° 1 2 70°
70° 4 3
110°

120° 5 6 60°
60° 8 7
120°

Name both pairs of alternate interior angles: ∠4+∠6   ∠3+∠5

Do they have the same relationship that they had when the lines were parallel?
NO, they are not ≅ if lines are not ∥

Name both pairs of same-side interior angles:
∠4+∠5   ∠3+∠6

Do they have the same relationship that they had when the lines were parallel?
NO, they are not supp. if lines are not ∥

Name the four pairs of corresponding angles:
∠1+∠5   ∠2+∠6   ∠4+∠8   ∠3+∠7

Do they have the same relationship that they had when the lines were parallel?
NO, ∠s are not ≅ if lines are not ∥

Which types of angle pairs are congruent? Vertical ∠s

Which types of angle pairs are supplementary? linear pairs