Alternate Exterior Angles:

If the four angles in between the parallel lines are called interior angles, what do you think the angles outside of the parallel lines are called? [**exterior angles**] Name the four exterior angles:

1, 2, 7, 8

Each pair of angles shaded in the diagrams below are called **<u>Alternate</u> Exterior Angles.**

6) Name both pairs of Same-side Interior Angles on your diagram in your notes, then use your patty paper to see if the angle measures are the same for each pair. Write a sentence in your notes about how the angle measures compare.

The pairs of same-side interior angles are
$\angle 3$ and $\angle 5$
$\angle$ $\angle$

They are not congruent.

We see that same-side interior angles are not congruent like the other pairs we've examined. Let's explore these more:

Trace angle 3 on a piece of patty paper. Then trace angle 5 so that it is adjacent to angle 3. What does it mean for angles to be adjacent? [they have the same vertex, share a side, and do not share any interior points.]

What do you notice about their measures? [The sum of their measure is 180°.]
If the sum of the measures of two angles is 180°, what can we say about the angles? [They are supplementary.]

Check to see if this is also true about $\angle$ $\angle$ **.** [It is]

7) **Write on your note paper:** Same-side interior angles formed by parallel lines and a transversal are supplementary.

Check to see if these pairs of angles are congruent for non-parallel lines cut by a transversal:

Have students draw a set of lines that are not parallel on their papers, and then draw a transversal through