Geometry

3.3 *Proofs with Parallel Lines*

....

Corresponding Angles Converse

If 2 lines are cut by _____ so the _____ ∠s are ≅, then the lines are ||.

Alternate Interior Angles Converse

If 2 lines are cut by transversals, so the _____∠s are _____, then the lines are ||.

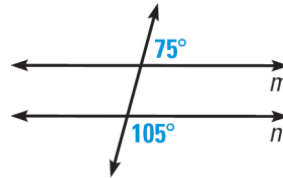**Alternate Exterior Angles Converse**

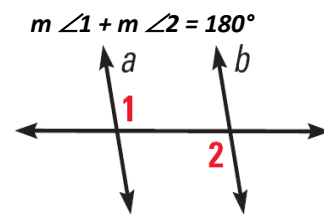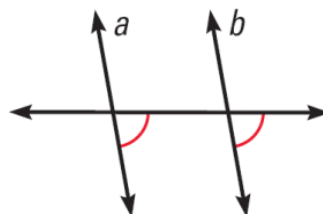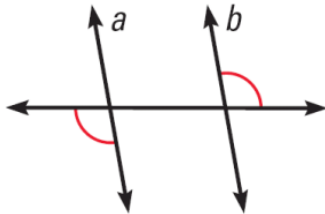If 2 lines are cut by transversals, so the _____ ∠ are ≅, then the lines are _____.

Consecutive Interior Angles Converse

If 2 lines are cut by transversals, so the _____ ∠ are supp., then the lines are _____.

Is there enough information to conclude that *m* || *n*?

Can you prove that the lines are parallel? Explain.

Transitive Property of Parallel Lines

If two lines are _____ to the same line, then they are _____ to each other.
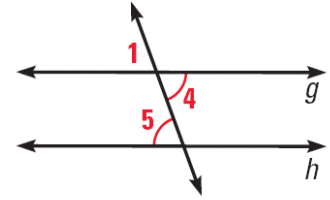
Instructions for Paragraph proofs

Paragraph proofs
- The proof is written in _____.
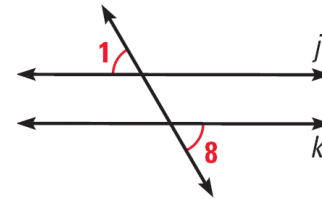- Still need to have the _____ and _____.

Write a paragraph proof to prove that if 2 lines are cut by a transversal so that the alternate interior ∠s are ≅, then the lines are ||.

Given: ∠4 ≅ ∠5

Prove: $g \parallel h$

If you use the diagram at the right to prove the Alternate Exterior Angles Converse, what GIVEN and PROVE statements would you use?

Assignment: 138 #2, 4, 6, 10, 12, 14, 16, 20, 22, 24, 26, 28, 30, 32, 35, 39, 41, 44, 45, 49 = 20 total