

Activity 2 — Properties of Parallel Lines Cut by a Transversal

Objectives

This activity is designed to help students discover the following postulates and theorems:

- ✓ *If two parallel lines are cut by a transversal, then the pairs of corresponding angles are congruent.*
- ✓ *If two parallel lines are cut by a transversal, then the pairs of alternate interior angles are congruent.*
- ✓ *If two parallel lines are cut by a transversal, then the pairs of consecutive interior angles are supplementary.*
- ✓ *If two parallel lines are cut by a transversal, then the pairs of alternate exterior angles are congruent.*

Vocabulary

parallel lines	transversal
angles	corresponding angles
alternate interior angles	same side interior angles
alternate exterior angles	congruent
supplementary	

Prerequisites

Students must understand how to:

- ✓ *Create two parallel lines.*
- ✓ *Measure and label angles.*

Answers

4. Answers will vary.
5. If two parallel lines are cut by a transversal, then the pairs of corresponding angles are congruent.
6. If two parallel lines are cut by a transversal, then the pairs of alternate interior angles are congruent.
7. If two parallel lines are cut by a transversal, then the pairs of same side interior angles are supplementary.
8. If two parallel lines are cut by a transversal, then the pairs of alternate exterior angles are congruent.