

Topic: Rectangle Proofs

Essential Question: How do you determine a figure is a rectangle?

To prove all properties of a parallelogram:

Property	1. Opposite sides are parallel
Proof	Use the slope formula
Property	2. Opposite sides are congruent
Proof	Use the distance formula
Property	3. Opposite angles are congruent
Proof	Prove right angles first
Property	4. Diagonals bisect each other
Proof	Use the midpoint formula
Property	5. Consecutive angles are supplementary
Proof	Prove right angles first

To prove properties specific to a rectangle:

Property	• Diagonals are congruent
Proof	Use the distance formula
Property	• Angles are right angles
Proof	Check for negative (opposite) reciprocal slopes

Summary: You can determine (prove) a figure is a rectangle by using the distance, midpoint, and slope formulas.