Parallelogram Theorems and Properties

Today's Standard

HSG.CO.C11 - Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.

Cues	Notes
What are the properties of parallelograms? How do you prove opposite sides are congruent? What is the significance of diagonals in parallelograms? How do rectangles relate to parallelograms?	Parallelograms have opposite sides and angles that are congruent. To prove opposite sides are congruent, use the properties of parallel lines and transversals. The diagonals of a parallelogram bisect each other, which can be proven using congruent triangles. Rectangles are a special type of parallelogram where the diagonals are congruent.

Summary

Understanding the properties and theorems of parallelograms is crucial in geometry. This includes proving that opposite sides and angles are congruent, and that diagonals bisect each other. Rectangles, as a special case of parallelograms, have congruent diagonals.