Theorems about Lines and Angles

Today's Standard

HSG.CO.C9 - Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.

Real-World Applications for this Standard

Designing and constructing buildings; Creating computer graphics; Navigating using maps; Engineering mechanical parts; Analyzing traffic patterns

Today I Learned

Today in math, we learned about proving theorems about lines and angles. We found out that vertical angles are always the same, and when a line crosses two parallel lines, some angles inside are the same too. We also learned that points on a line that cuts another line exactly in half are always the same distance from the ends of the line it cuts.

Common Stumbling Blocks

Sometimes kids think that all angles made by crossing lines are the same, but that's not true. Only some pairs of angles are the same when the lines are parallel. Another mistake is thinking that points on a line cutting another line in half aren't always the same distance from the ends, but they are.

Quiz Me

- What are vertical angles?

- What happens when a line crosses two parallel lines?

- What is a perpendicular bisector?

- Are alternate interior angles always the same?

- Can points on a perpendicular bisector be different distances from the ends?

Help Me

We use these math ideas in many real-world things! For example, when making buildings, designing computer graphics, or even planning roads. Understanding how angles and lines work helps us make sure everything fits together perfectly and works correctly.