

Parent Guide to the

# Triangle Theorem Proofs

## Today's Standard

HSG.CO.C10 - Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.

## Real-World Applications for this Standard

Architectural design; Engineering structures; Computer graphics; Robotics; Navigation and mapping

#### Today I Learned

Today, we learned about triangles. We discovered that the inside angles of a triangle always add up to 180 degrees. We also learned that in special triangles called isosceles triangles, the two bottom angles are the same.

# **Common Stumbling Blocks**

Sometimes, kids think that the inside angles of a triangle can add up to more or less than 180 degrees, but that's not true. Another mistake is thinking that the two bottom angles of an isosceles triangle aren't always the same.

# Quiz Me

- How many degrees are inside a triangle?
- What do we call a triangle with two equal sides?
- Are the bottom angles of an isosceles triangle the same?
- What happens if you add up all the inside angles of a triangle?
- Can the inside angles of a triangle add up to more than 180 degrees?

## Help Me

Triangles are everywhere! When you see a roof on a house, it's shaped like a triangle. The inside angles of that triangle always add up to 180 degrees. In special triangles called isosceles triangles, the two bottom angles are always the same. This helps builders and engineers make strong and balanced structures.