



## Pythagorean Theorem Proofs

### Today's Standard

8.G.B6 - Explain a proof of the Pythagorean Theorem and its converse.

| Cues                   | Notes   |
|------------------------|---|
| Pythagorean Theorem    | The Pythagorean Theorem states that in a right-angled triangle, the square of the hypotenuse is equal to the sum of the squares of the other two sides.                       |
| Right-angled triangles |   |
| Proofs                 | A proof of the theorem involves showing this relationship holds true using algebraic and geometric methods.   |
| Converse               | The converse of the theorem states that if the square of one side of a triangle is equal to the sum of the squares of the other two sides, then the triangle is right-angled. |
| Applications           |   |
|                        |   |
|                        | Understanding the theorem and its converse is crucial for solving real-world problems involving right-angled triangles.   |
|                        | Applications include architecture, navigation, technology, and sports.  |

### Summary

The Pythagorean Theorem and its converse are fundamental concepts in geometry, essential for solving problems involving right-angled triangles. Mastery of these concepts enables students to apply them in various real-world contexts.