

Matthew Yubas
Instructional Video Outline

Method

Instructional Video

Topic

Identifying and Applying the Pythagorean Theorem

Background

A key element of geometry is learning about triangles. Triangles are three-sided objects described by lengths and angles. A special type of triangle is the Right Triangle. A Right Triangle is defined as a triangle with one angle of 90 degrees. The lengths of a Right Triangle can be found using the Pythagorean Theorem. Knowing the lengths of triangles is important especially in the fields of architecture and mechanical engineering. Understanding how to apply the Pythagorean Theorem is a Texas Essential Knowledge and Skills objective.

Objectives

The student will:

- Identify the formula of the Pythagorean Theorem.
- Identify the parts of a Right Triangle as related to the Pythagorean Theorem.
- Solve the lengths of right triangles using the Pythagorean Theorem.
- Identify how the Pythagorean Theorem can be used in real life situations.

Context of Use

This Instructional Asset would be used as an introduction to the topic of the Pythagorean Theorem and how to solve the lengths of Right Triangles. This Instructional Asset supports the achievement of objectives by connecting student's prior knowledge and real-life situations to create new knowledge of geometry.

Instructional Strategies

The following instructional strategies will be used in this instructional asset:

- 1) Setting Objectives
 - a) Students will be presented with objectives in order to create their own objectives.
- 2) Questions, Cues and Advance organizers
 - a) Students will be presented with information at the beginning of the lesson to help activate prior knowledge and to prepare for the upcoming topic.
- 3) Nonlinguistic representations
 - a) Students will be shown images of Right Triangles along with equations to help reinforce understanding based on the dual-coding theory.
 - b) Students will be shown images of Right Triangles in real situations to help reinforce understanding.
- 4) Identifying similarities and differences
 - a) The Right Triangle will be compared to another type of triangle to reinforce the specific nature of a Right Triangle.