

# Unit 7

## 7.1 Pythagoras

David Guenther

### Preamble

### Objective

Understand the Pythagorean theorem, including its history and proof, and be able to use it in situations

### Definitions

- **right triangle:** A triangle that has at least one right angle (90 degrees)
- **Hypotenuse:** the longest side of a triangle (and always across from the right angle)
- **leg:** the two other sides of a triangle that are not the hypotenuse
- **Pythagorean theorem:** the square of the hypotenuse of a triangle equals the sum of the squares of the two smaller sides.

### Start

### Intro

Video: [https://www.youtube.com/watch?v=X1E7I7\\_r3Cw](https://www.youtube.com/watch?v=X1E7I7_r3Cw) Proof: <http://www.mathsisfun.com/geometry/pythagorean-theorem-proof.html>

And perform the proof with a piece of paper if your unsure

### Example 1

pg. 228: 1

## **Example 2**

pg. 276: 2

## **End**

## **Assignment**

pg. 280: 5 - 7