Pythagorean Theorem Notes – DLC 1229

Who is Pythagoras?

* Where was he from and when did he live
  + Greek philosopher, lived from 569 BC to 475 BC
* What is he famous for
  + The Pythagorean theorem, was the first to prove it
    - Babylonians may have been aware of this relationship 1000 years earlier

What is the Pythagorean Theorem?

* a2 + b2 = c2
* Theorem: The sum of the squares of the lengths of the legs of a right triangle ('a' and 'b' in the triangle shown below) is equal to the square of the length of the hypotenuse ('c').

How has it been proven that it works?

* Video: <http://www.usna.edu/MathDept/mdm/pyth.html>
* Tessellations of 4 identical triangles

What can it be used for?

* Ramps – Americans with disabilities at
  + Rise and run
* Stairs
  + Tread depth (how deep the step is)
  + Rise of step (high it can be)
  + Incline of step = hypotenuse
* Roofs
* Football field goal kicks
* Baseball bat hitting

http://www.wcboe.k12.md.us/custom\_pages/Inst\_Technology/Main/MS/Math/PYthagoreanTheorem/phythagoreantheorem.htm