Pythagoras theorem

Worksheet 1 Teacher's notes

1. Before we learn about Pythagoras Theorem, let's look at the life of a famous philosopher and mathematician. Read the text and complete the gaps:

Pythagoras lived in the 500s BC, and was one of the first Greek mathematical **thinkers** He spent most of his life in the Greek colonies in Sicily and southern Italy. He had a group of **followers** (like the later disciples of Jesus) who followed him around and taught other people what he had taught them. The Pythagoreans were known for their pure **lives** (they didn't eat beans, for example, because they thought beans were not pure enough). They wore their hair long, and wore only simple **clothin**g, and went barefoot. Both men and women were Pythagoreans.

Pythagoreans were interested in **philosophy** , but especially in music and mathematics, two ways of making order out of chaos. **Music** is noise that makes sense, and **mathematics** is rules for how the world works.
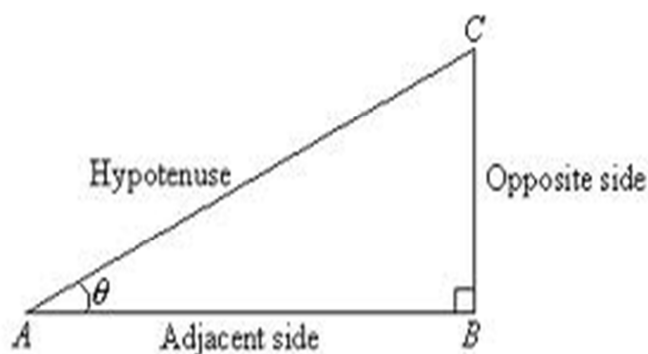
Pythagoras himself is best known for proving that the Pythagorean Theorem was true. The Sumerians, two thousand years earlier, already knew that it was generally true, and they used it in their **measurements** , but Pythagoras is said to have proved that it would always be true. We don't really know whether it was Pythagoras that proved it, because there's no evidence for it until the time of Euclid, but that's the tradition. Some people think that the must have been written around the time of Euclid, instead.[1]

clothing   followers   lives   mathematics   measurements   music   philosophy proof   thinkers

2. Now let's have a look at Pythagoras theorem.
Draw a right-angled triangle and name the right-angled sides *a* and *b*, the third side *c*.
Where in your drawing is: *adjacent side, opposite side, angle, hypotenuse, length*.

http://www.mathsteacher.com.au/year10/ch15_trigonometry/01_ratios/22sides.htm

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[1] taken from : http://www.historyforkids.org/learn/greeks/science/math/pythagoras.htm

3. Go to http://www.bbc.co.uk/bitesize/ks3/maths/shape_space/pythagoras_theorem/activity watch a video and later complete the theorem:

In a right angled triangle:

the square of the hypotenuse is equal to

the sum of the squares of the other two sides.

4. Use these websites to read and learn some more:
http://www.mathsisfun.com/pythagoras.html
http://www.ducksters.com/kidsmath/pythagorean_theorem.php
http://www.historyforkids.org/learn/greeks/science/math/pythagoras.htm

students' own answers

5. Time to put the theorem into practice, go to   http://www.bbc.co.uk/bitesize/quiz/q32136889 and do the quiz!

students' own answers