

A tangram based on Perigal's proof of Pythagoras' theorem

1. Cut out the small square and the four pieces of the medium square.
2. Arrange the five pieces to exactly cover the square on the hypotenuse.
3. Explain how this shows that Pythagoras' theorem applies to this right-angled triangle.

How to make the tangram yourself for any right-angled triangle.

Draw any right-angled triangle, and put a square on each side. Find the centre of the second largest square (call it M), and draw a line through M parallel to the hypotenuse of the right-angled triangle. Then draw a line through M perpendicular to the hypotenuse. Cut up the second largest square into the 4 pieces formed. Perigal proved that, whatever right-angled triangle is chosen at the start, these 4 pieces can always be rearranged around the smallest square to form the largest square.

