Engineering

Pythagoras Theorem cut-out
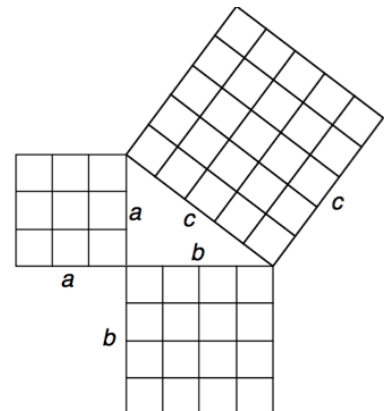
Content and alignment

A working knowledge of the Pythagoras Theorem is essential for those working in the engineering field. Application of the Theorem is necessary for Unit Standard 21905.

Intent

The Pythagoras Theorem states that in a right-angled triangle the square on the hypotenuse (the longest side or the side opposite the right angle) is the same size as the squares on the other two sides - sometimes written as **$c^2 = b^2 + a^2$**. The cut-out below is designed to provide learners with a tactile experience with the Theorem. In turn, this will provide the learner with a concrete understanding of the Theorem.

Instructions

1. Hand out the cut-out to learners.
2. Ask learners to discuss whether they think square *a* and square *b* will fit equally into square *c*.
3. Have learners cut out all the squares in square *a* and square *b* and arrange them on top of square c.
4. Follow this up with a conversation, and ask learners whether they think this is true of any right-angled triangle.