

The quintessential proof

Teacher notes

Why use this resource?

Here students are invited to explore their understanding of similarity, before going on to give a proof of Pythagoras's theorem. This argument is an excellent use of proportional reasoning, and can help to give a feel for why Pythagoras's theorem is really true. The historical background page gives an overview of how this concept was developed.

Possible approach

Students could attempt questions 1 - 3 by themselves, before sharing methods and answers as a class. This should help bring out the importance of similarity before they go on to tackle question 4.

Key questions

- What do all the shapes have in common for questions 1 - 3. Is this the same for question 4? How can we use this fact?
 - Are they surprised by what they find in questions 1 - 3?
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A version of this resource has been featured on the [NRICH website](https://nrich.maths.org/). You might like to look at some students' solutions that have been submitted there.