

Proving Pythagoras

Teacher notes

Why use this resource?

This resource provides four starting points for proofs of Pythagoras' theorem. Students will need to finish off the arguments and compare and contrast them. This resource is useful for considering the merits of different arguments, and for reminding students of the importance of proof. These problems can also be used to encourage mathematical discussion between students.

Preparation

Print off the different problems for students to work on in pairs.

Possible approach

Give each of the pairs of students one of the problems to solve. Ask them to discuss the problem and explain all their thinking. Once they have finished their first problem, they can have another. Ask them to consider which proof they preferred.

As a plenary, pairs of students could explain their problem and solutions to rest of the class. As a whole class, students can then decide which proof they preferred.

Key questions

Why do we need to prove Pythagoras' theorem?

Possible extension

Can they find another way of proving Pythagoras' theorem? (This is also a useful homework as it gives students an opportunity to research Pythagoras' theorem and then choose their favourite proof, maybe for display or further discussion in the future).