

3.2 Exploring the Pythagorean Relationship

MathLinks 8, pages 88-94

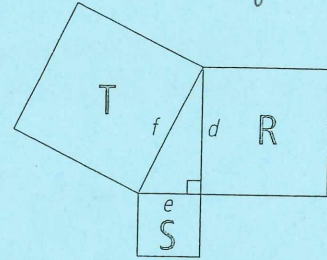
Key Ideas Review

Use the diagram below to complete #1.

1. a) Write an addition statement to show the relationship of the squares, using the variables provided.*

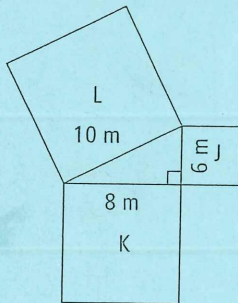
b) Use words to describe the relationship of the squares.

* $d, e + f$ represent the side lengths
 $R, S + T$ represent the area of the squares.

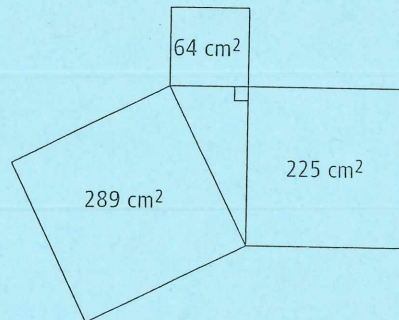


Practise and Apply

2. a) What are the areas of the squares in the diagram? Show your work.



3. a) Complete the table using information provided in the diagram below.



Area of Square	Side Length of Square

b) Write two addition statements to show the relationship between the squares.

Name: _____

Date: _____

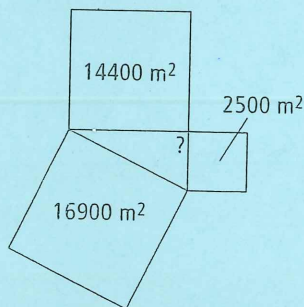
b) Show the relationship of the squares.

4. The sides of a right triangle measure 15 cm, 20 cm, and 25 cm.

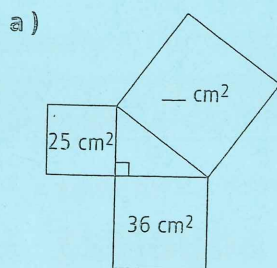
a) What is the area of each square? Show your work.

b) Show the relationship of the squares.

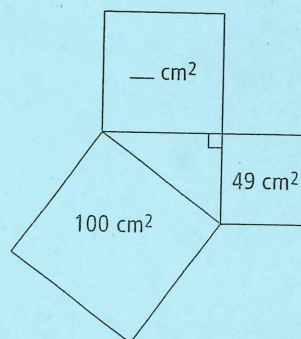
5. Is the triangle below a right triangle? Explain your reasoning.



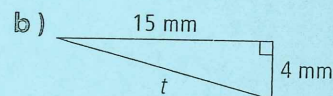
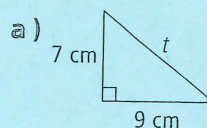
6. Use the Pythagorean relationship to find the unknown area of the squares in the following diagrams. Show your work.



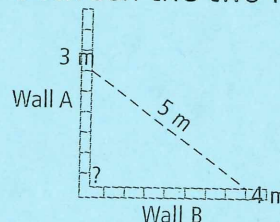
b)



7. What is the area of the square on side t of each triangle? Show your work.



8. Jeremy wants to make sure that the walls he is building are at right angles to each other. He measures and marks 3 m along Wall A, and 4 m along Wall B. The distance between the two marks is 5 m.



Are the walls at right angles to each other? Explain how you know.