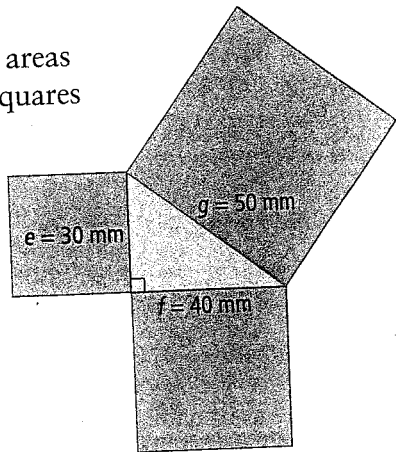


# Check Your Understanding

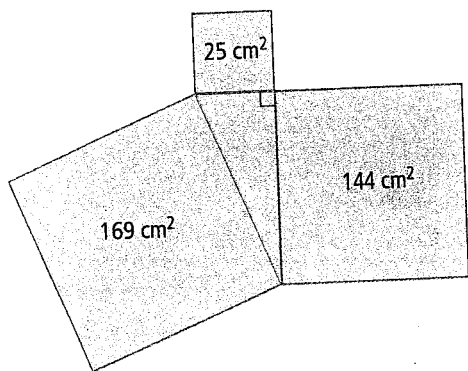
## Practise

For help with #4 to #7, refer to Example 1 on page 90.

4. What are the areas of the three squares shown?



5. A right triangle has side lengths of 40 mm, 75 mm, and 85 mm.
- Sketch the triangle. Draw a square on each side of the triangle.
  - What are the areas of the three squares?
  - Write an addition statement with the areas of the three squares.
6. a) Write an addition statement using the areas of these three squares.

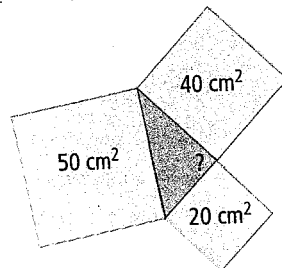


- What is the side length of each square?
- Describe, using words and symbols, the relationship between the side lengths of each square.

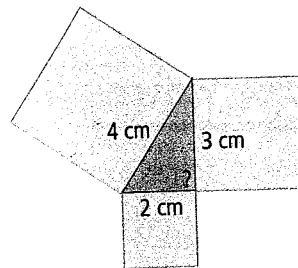
7. The sides of a right triangle measure 9 cm, 12 cm, and 15 cm.
- What is the area of each square attached to the three sides of the right triangle?
  - Write an addition statement showing the relationship between the areas of the three squares.
  - Describe, using words and symbols, the relationship between the side lengths of each square.

For help with #8 to #11, refer to Example 2 on pages 90–91.

8. Is the triangle shown a right triangle? Explain your reasoning.



9. a) Calculate the areas of the three squares.

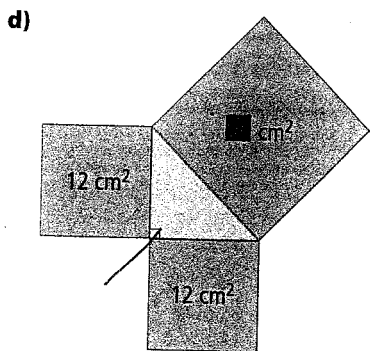
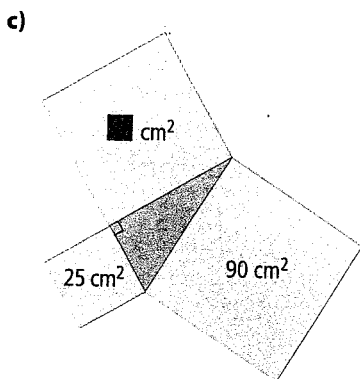
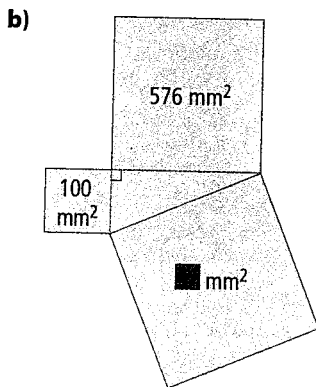
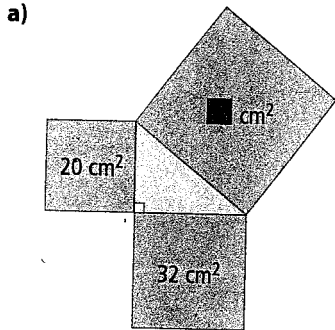


- b) Is this triangle a right triangle? Explain.

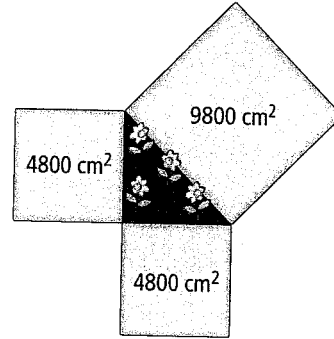
10. A triangle has side lengths of 120 mm, 160 mm, and 200 mm. Is the triangle a right triangle? Explain your reasoning.
11. The side lengths of a triangle are 5 cm, 6 cm, and 8 cm. Determine whether the triangle is a right triangle. Explain.

**Apply**

12. Use the Pythagorean relationship to find the unknown area of each square.



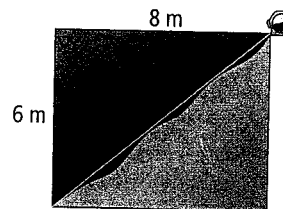
13. A small triangular flower bed has a square stepping stone at each of its sides. Is the flower bed in the shape of a right triangle? Explain your reasoning.



14. Show whether each triangle in the table is a right triangle.

Triangle	Side Lengths (cm)
A	9, 12, 15
B	7, 8, 11
C	7, 24, 25
D	16, 30, 34
E	10, 11, 14

15. Construction workers have begun to dig a hole for a swimming pool. They want to check that the angle they have dug is  $90^\circ$ . They measure the diagonal as shown to be 9.5 m. Is the angle  $90^\circ$ ? Explain your reasoning.



16. Baldeep is building a wooden box for storing coloured pencils. The box will have rectangular sides that are 12 cm wide and 20 cm long. Show how Baldeep can be sure the sides are rectangular, without using a protractor.