Practice worksheet | Pythagoras' theorem

Why the theorem works

Name: _____ Date: _____

6 questions | 15 marks

1. Squares on two legs have areas 25 and 144 square centimetres. Find the hypotenuse-square area and the hypotenuse length. [3 marks]

2. A square of side 9 cm is drawn on a hypotenuse. One leg-square has area 32 square centimetres. Find the other leg-square area. [2 marks]

3. In the dissection, a = 5 and b = 12. Find the total area of the four triangles. [2 marks]

4. For a = 5 and b = 12, find the outer square area and central square area. [3 marks]

5. Explain why the 6-8-10 relationship is $36 + 64 = 100$, not $6 + 8 = 10$. [2 marks]

6. Expand $(a + b)^2$ and subtract $2ab$. Explain what remains. [3 marks]