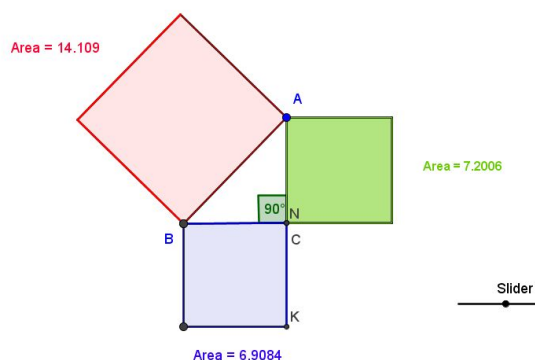


Student Activity Theorem 14

Use in connection with interactive file “Theorem 14” on the Student’s CD.



1. There are three squares built on the sides of the right angled triangle in the diagram. Write down the areas of the three squares.

Red Square _____

Blue Square _____

Green Square _____

Add the area of the Blue Square to the area of the Green Square

Area of Blue Square + Area of Green Square = _____

Does this total Area equal the Area of the Red Square? _____

2. Drag the slider to the left. Now write down the areas of the three squares.

Red Square _____

Blue Square _____

Green Square _____

Add the area of the Blue Square to the area of the Green Square

Area of Blue Square + Area of Green Square = _____

Does this total Area equal the Area of the Red Square? _____

3. Drag the slider to the right. Now write down the areas of the three squares.

Red Square _____

Blue Square _____

Green Square _____

Add the area of the Blue Square to the area of the Green Square

Area of Blue Square + Area of Green Square = _____

Does this total Area equal the Area of the Red Square? _____

4. Write down in your own words what conclusion can be drawn from the answers to questions 1, 2 and 3 _____

5. Click on the Tick Box on the interactive file to reveal the wording of this theorem.

Did you come to this conclusion? _____.

5. If the Area of the Red Square is a^2 , the Area of the Blue Square is b^2 and the Area of the Green Square is c^2 can we conclude that

$$a^2 = b^2 + c^2 \quad \underline{\hspace{10em}}$$

6. If the Area of the Red Square is a^2 , the Area of the Blue Square is b^2 and the Area of the Green Square is c^2 can we conclude that

$$b^2 = a^2 + c^2 \quad \underline{\hspace{10em}}$$

7. If the Area of the Red Square is r^2 , the Area of the Blue Square is b^2 and the Area of the Green Square is g^2 can we conclude that

$$r^2 = b^2 + g^2 \quad \underline{\hspace{10em}}$$