## Unit 3 Lesson 14: Proving the Pythagorean Theorem

### 1 Notice and Wonder: Variable Version (Warm up)

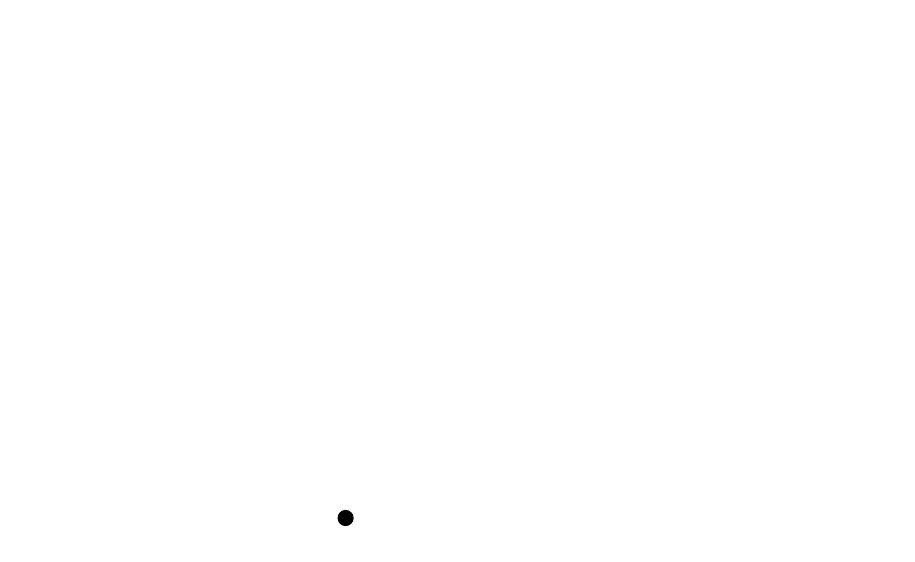
#### Student Task Statement



What do you notice? What do you wonder?

### 2 Prove Pythagoras Right

#### Student Task Statement

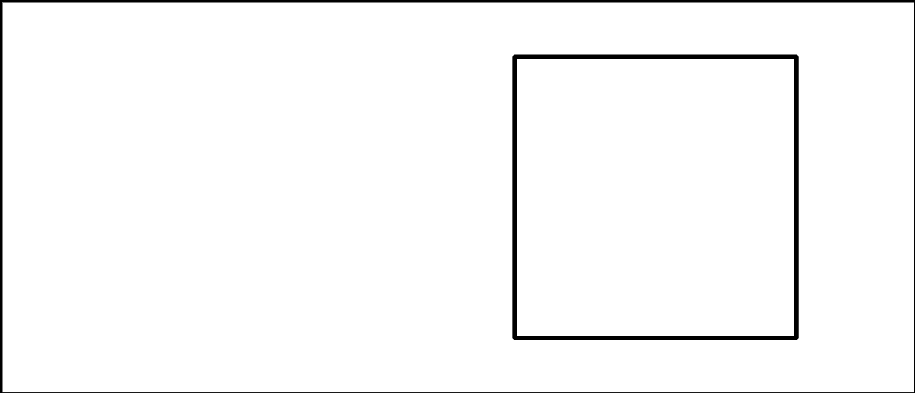


Elena is playing with the equivalent ratios she wrote in the warm-up. She rewrites . Diego notices and comments, “I got . The  and remind me of the Pythagorean Theorem.” Elena says, “The Pythagorean Theorem says that . I bet we could figure out how to show that.”

1. How did Elena get from ?
2. What equivalent ratios of side lengths did Diego use to get ?
3. Prove in a right triangle with legs length and and hypotenuse length .

### 3 An Alternate Approach

#### Student Task Statement



When Pythagoras proved his theorem he used the 2 images shown here. Can you figure out how he used these diagrams to prove in a right triangle with hypotenuse length ?

#### Images for Activity Synthesis





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