

## Annotated Answer Key

Name\_\_\_\_\_

Grade 08, Unit 05, Lesson 05: Well-Known Pythagorean Triples and Their Similar Triangles

<p>1. Use the Pythagorean Theorem to prove that 8, 15, and 17 can be the values for sides of a right triangle.</p> $8^2 + 15^2 = 17^2$ $64 + 225 = 289$ <p><b>NOTE:</b> Be sure students can articulate which lengths are legs and which is the hypotenuse.</p>	<p>2. Using a scale factor of 4, write the side lengths of a right triangle that is similar to an 8, 15, 17.</p> $(8)(4), (15)(4), (17)(4)$ $32, 60, 68$
<p>3. Using a scale factor of x, write the side lengths of a right triangle that is similar to an 8, 15, 17</p> $(8)(x), (15)(x), (17)(x)$ $8x, 15x, 17x$	<p>4. Use the Pythagorean Theorem to prove that 35, 120, and 125 can be the values for sides of a right triangle.</p> $35^2 + 120^2 = 125^2$ $1225 + 14400 = 15625$
<p>5. Reduce 35, 120, and 125 by a common factor to find a similar triangle that is also a right triangle.</p> $35/5, 120/5, 125/5$ $7, 24, 25$	<p>6. Create 3 Pythagorean Triples that are similar triangles to a 3, 4, 5, triangle.</p> <p>answers will vary</p> <p><b>NOTE:</b> all answers should show 3x, 4x, 5x</p>