**Supplementary Activity**

**Unit 4 Investigation 5**

**Similar Right Triangles**

**Open the file:** <http://tube.geogebra.org/material/simple/id/3219053>.

Interact with the applet for a few minutes; then answer the questions that follow.

1. When you drag the large black dot, what stays the same? What changes?

2. What is the sum of the measures of the red and blue angles? How do you know this to be true?    

3. The segment that was drawn as you dragged the slider is called an **altitude.** This **altitude**was **drawn to the hypotenuse**. How many right triangles did this **altitude** split the original right triangle into?

4. What does the special movement of the red and blue angles imply about these two smaller right triangles?  What previously learned theorem justifies your answer?

5. Does your response for (4) also hold true for the relationship between the ORIGINAL BIG RIGHT TRIANGLE and either one of the smaller right triangles? If so, how/why do you know this?