

Name: _____ Date: _____ Period: _____

Geometry Argumentation – Special Right Triangles

Marianna and Jade created their own special right triangles, $\triangle ABC$ and $\triangle ABD$. They drew the following diagram. Marianna and Jade both want the length of \overline{AC} to be $5\sqrt{2}$. However, Marianna and Jade disagree on the length of \overline{AD} . Marianna thinks that the length of \overline{AD} will be less than 9. Jade disagrees, and thinks that the length of \overline{AD} will be greater than 9. Which student is correct, and what is the correct answer? Construct a mathematical argument to convince a classmate that your answer is correct.

