

Geometric Naming

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Hi, I recently took a test in my geometry class in school. One of the questions was this:

Given isosceles triangle ABC, such that $AB=AC$. Draw point D on segment AC such that, $BD=AD=BC$. Find the measure of angle A.

After seeing the solution given, angle $A=36$. However, my argument is that I could place point D on segment AC such that D and C are coinciding. The given restrictions would be met, and I would get the answer of 60 for angle A.

Is there any rule that says a point cannot be named with two different variables? Or any other fact that would prove my reasoning wrong?

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