Prove It...
With Rigid Motion Transformations

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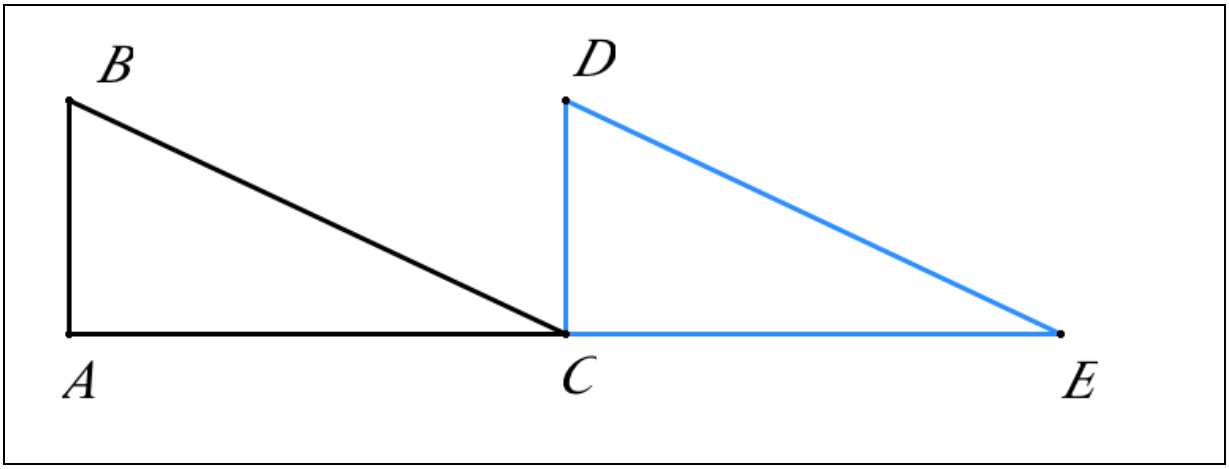
1. By using rigid motion transformation(s), prove that triangles ABC and CDE are congruent.



Identify appropriate transformation(s). **Identify details.**	
Reflection • Object to reflect • Line of reflection	**Rotation** • Object to rotate • Point of rotation • Angle of rotation • Direction of rotation
Translation • Object to translate • Length of translation vector • Direction of translation vector	**NOTE** When applying multiple transformations, explain:

Tools **(check all that apply)**
○ **Paper folding** ○ **Patty Paper** ○ **Compass & Straightedge** ○ **Reflector** ○ **TI-Nspire** ○ **Other_____**

Explanation		**Standards for Mathematical Practice**
		Make sense of problems and persevere in solving them.
		Reason abstractly and quantitatively.
		Construct viable arguments and critique the reasoning of others.
		Model with mathematics.
		Use appropriate tools strategically.
		Attend to precision.
		Look for and make use of structure.
		Look for and express regularity in repeated reasoning.

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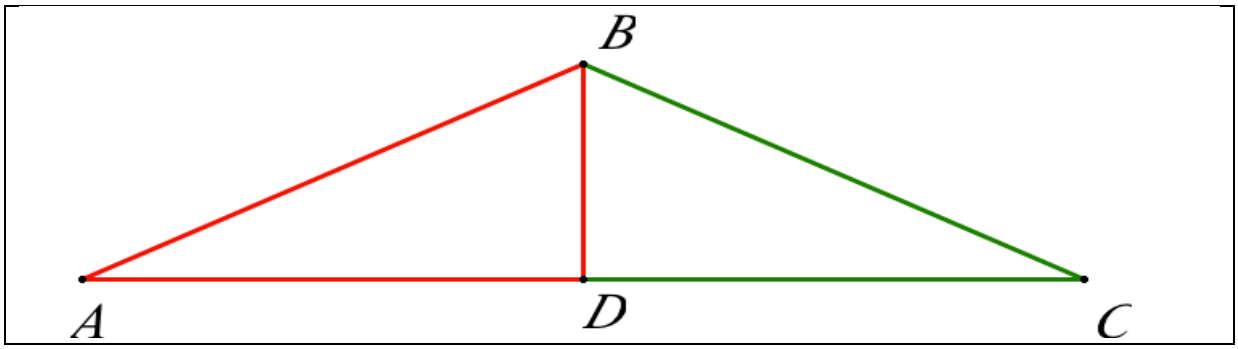
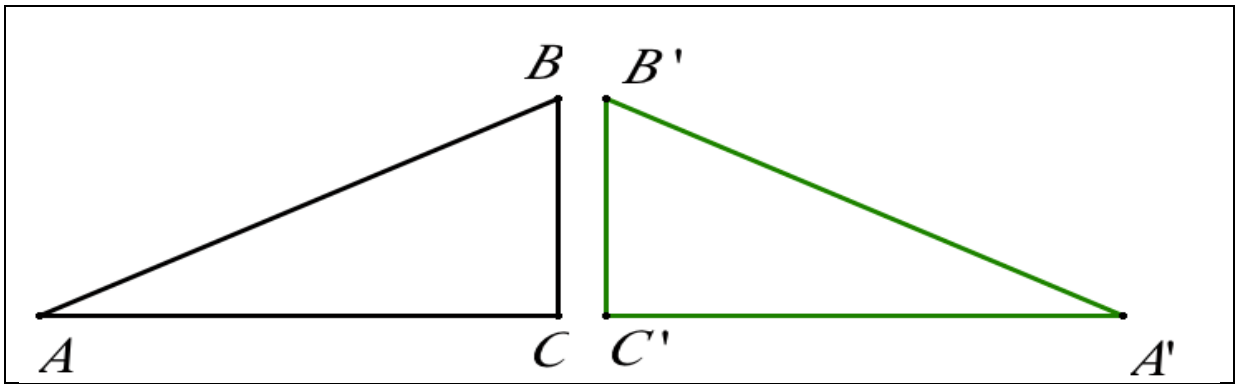
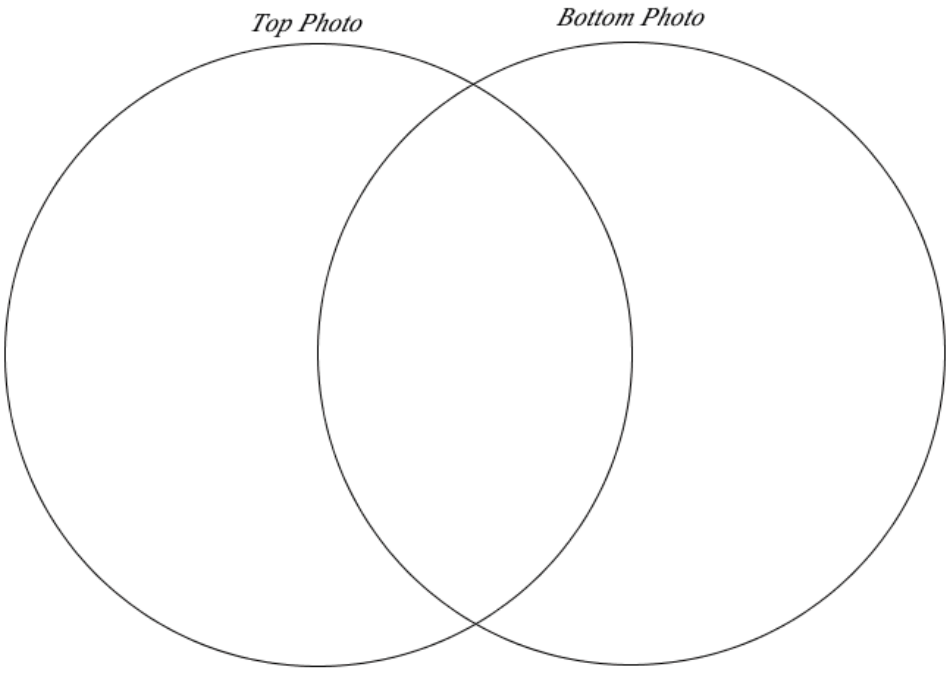
2. Use the Venn Diagram to compare and contrast the triangles in each of the photos, including the process of confirming congruence, through rigid motion transformations. Provide explanation for the lower set of triang.es.





Similarities and differences in using Rigid Motion Transformations to verify congruence.



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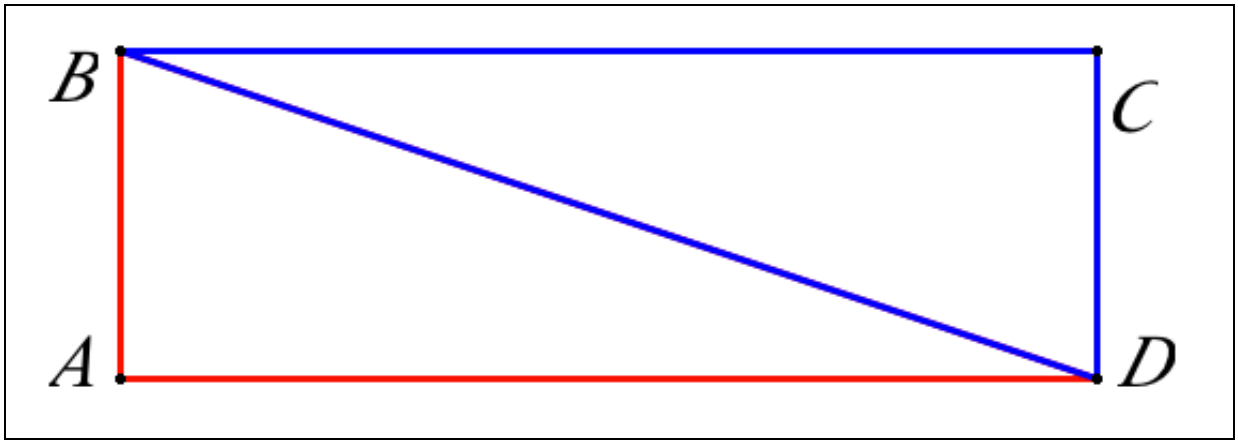
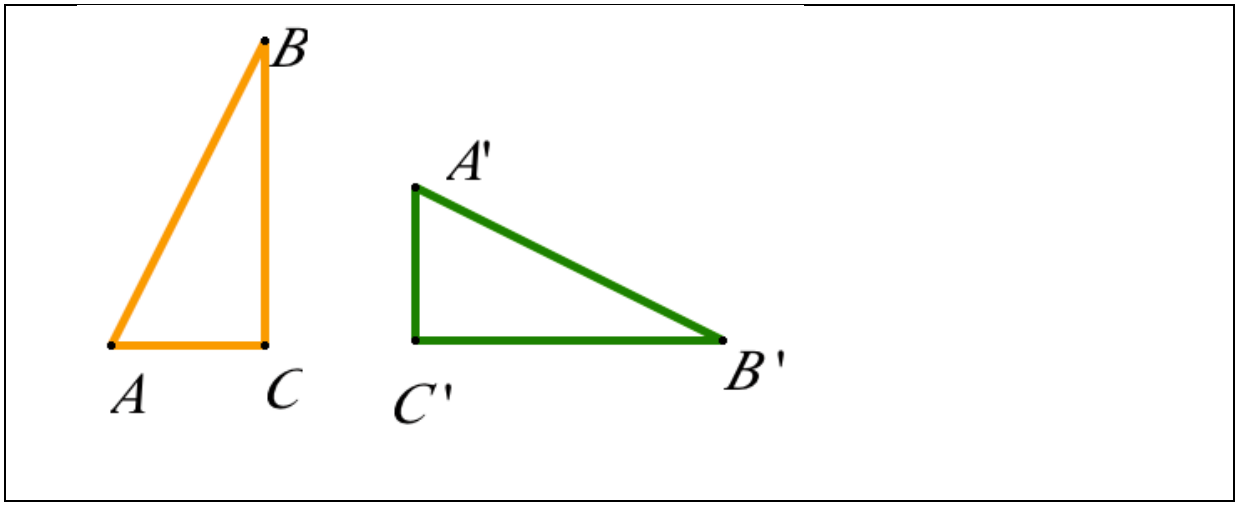
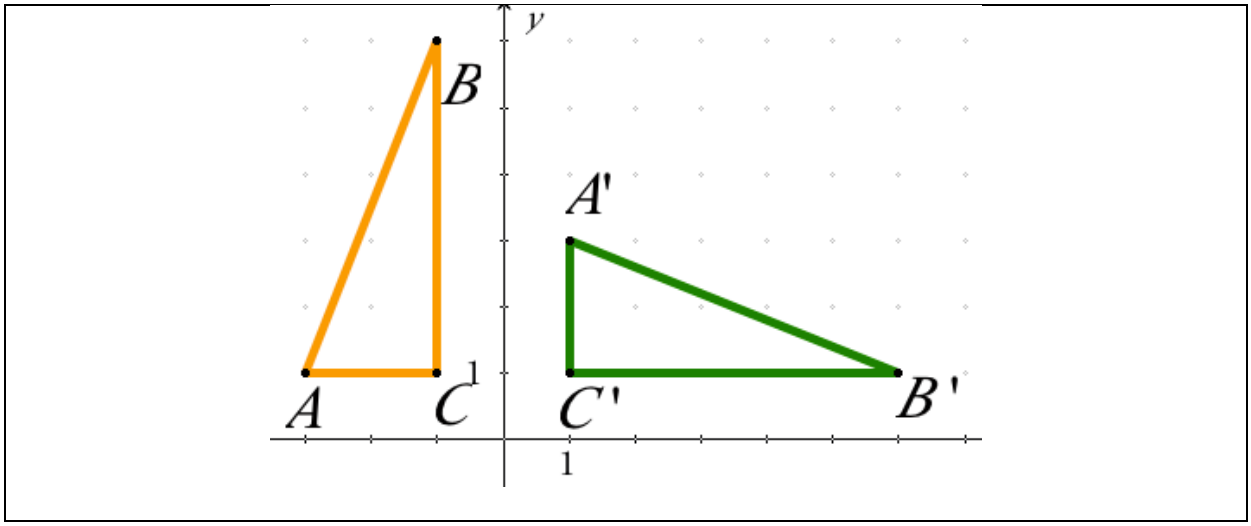
3. By using rigid motion transformation(s), prove that triangles ABD and CDB are congruent.



4. Use the Venn Diagram to compare and contrast the triangles in each of the photos, including the process of confirming congruence, through Rigid Motion Transformations.





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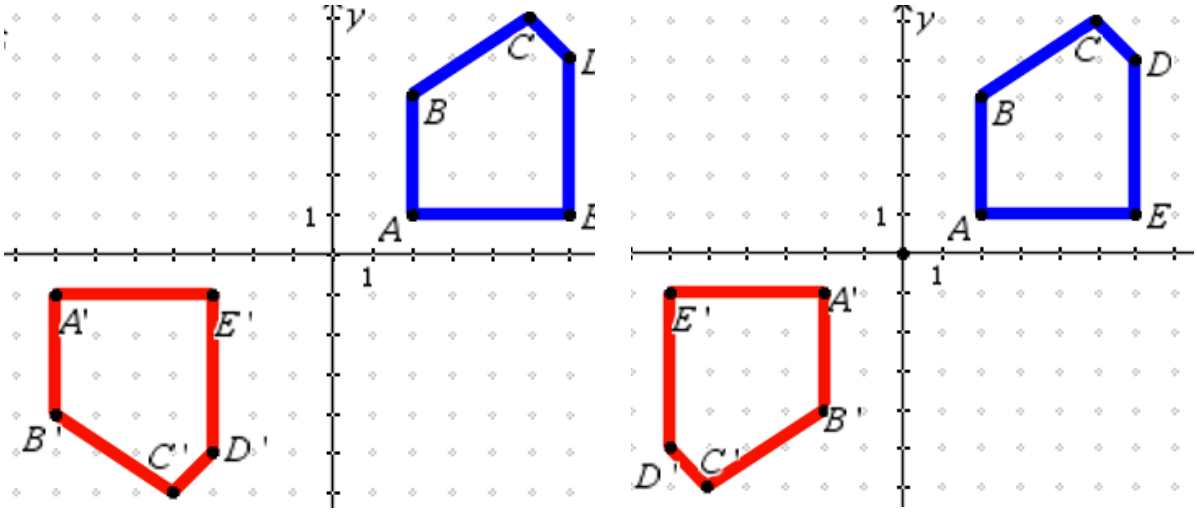
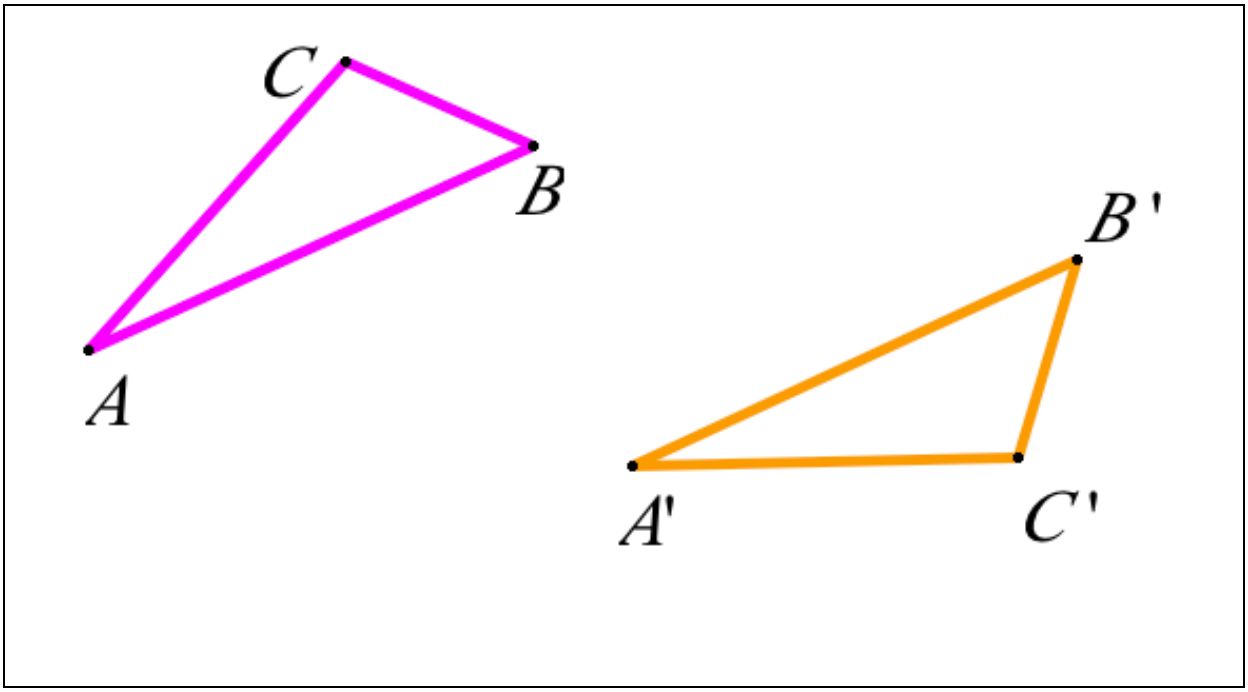
5. Choose only one pair of polygons to investigate. By using rigid motion transformation(s), prove that polygons ABCDE and A'B'C'D'E' are congruent.



6. Develop two methods to apply rigid motion transformations to prove that triangles ABC and A'B'C' are congruent. Which method is more elegant? Why?



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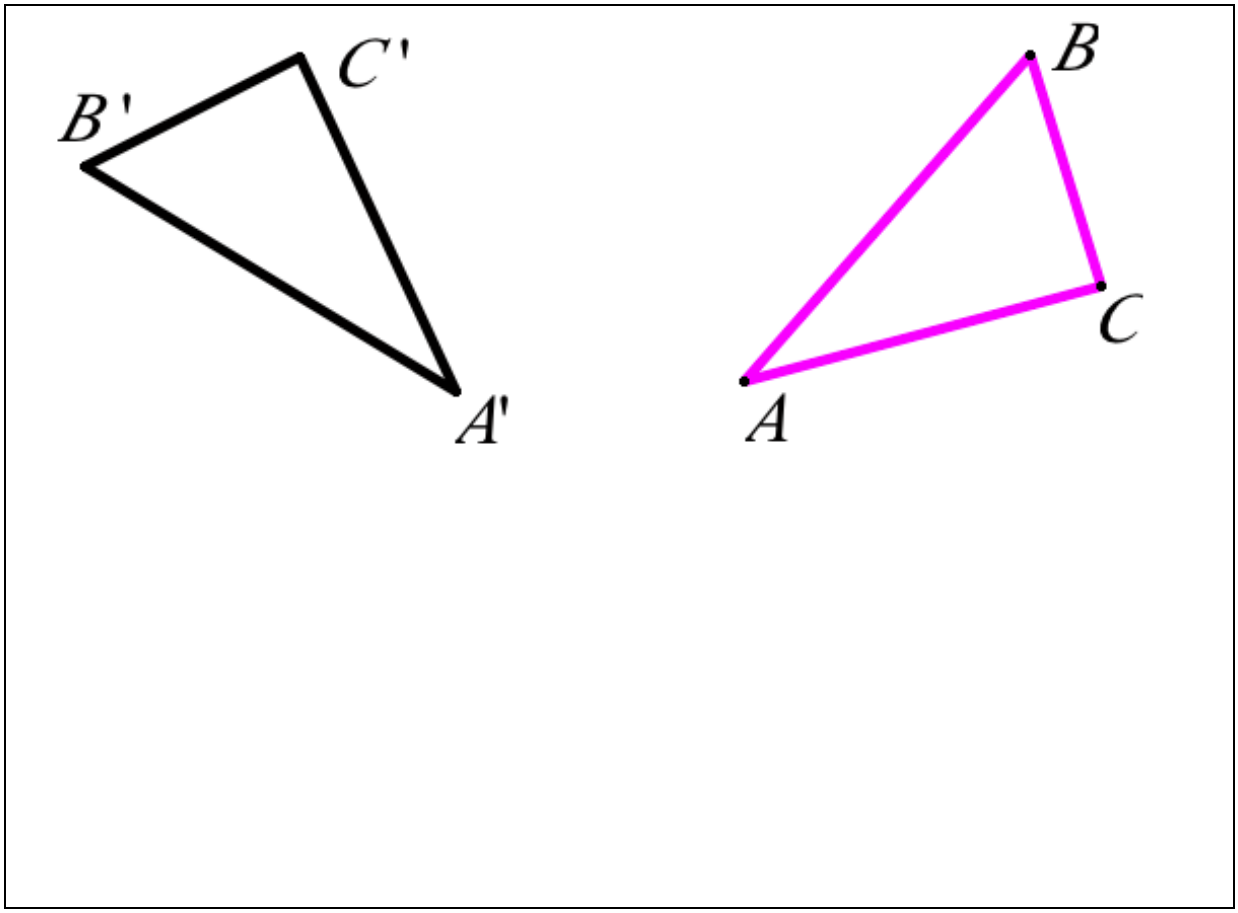
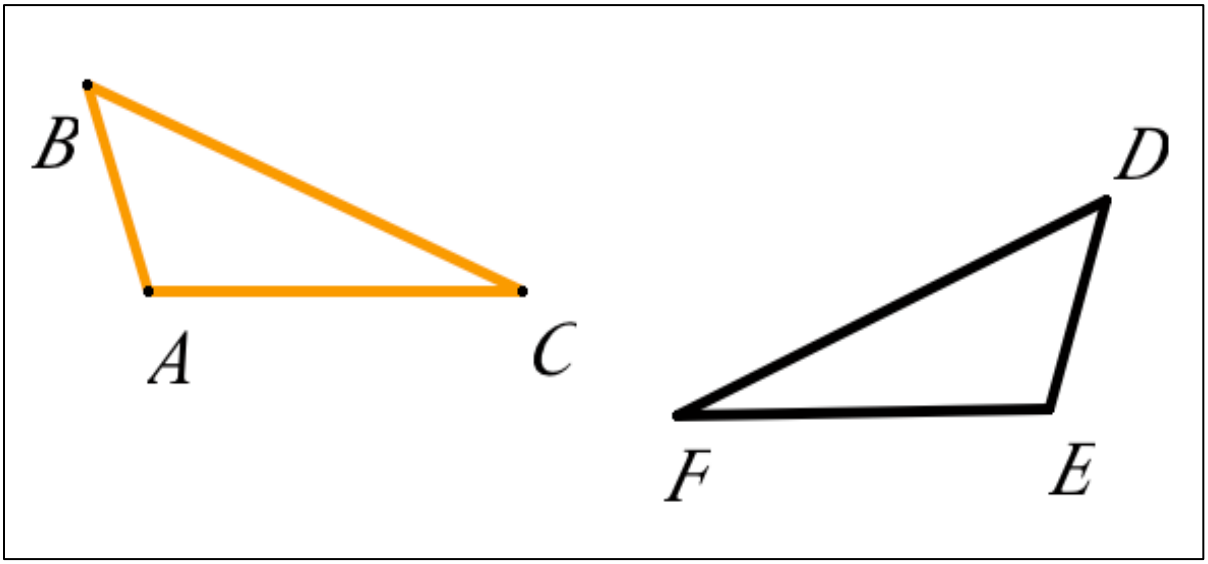
7. By using rigid motion transformation(s), prove that triangles ABC and A'B'C' are congruent.



Write a plan for a convincing argument, supporting verification of congruency of these triangles through the use of rigid motion transformations.



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