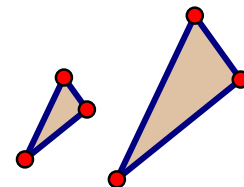
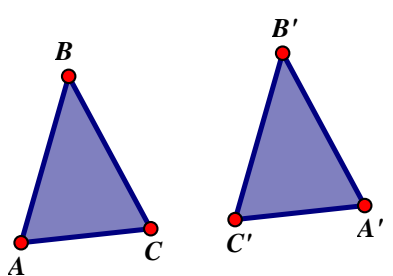
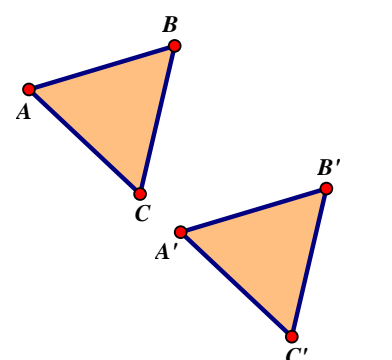
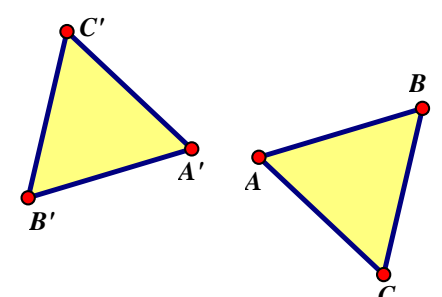


Quick Concept: The isometric transformations of reflection, rotation and translation each have distinguishing properties. Distance, orientation and special points all help us distinguish the transformation type.

1) Why isn't a dilation an isometric transformation?



2) The isometric transformations have certain properties. These unique combination of properties allows us to distinguish when those transformation are being used. Use those properties to help you determine which isometric transformation has taken place.

<p>a)</p>  <p style="text-align: center;">TRANSFORMATION:</p> <p>_____</p> <p>What did you see in the diagram that led you to chose that particular transformation?</p>	<p>b)</p>  <p style="text-align: center;">TRANSFORMATION:</p> <p>_____</p> <p>What did you see in the diagram that led you to chose that particular transformation?</p>	<p>c)</p>  <p style="text-align: center;">TRANSFORMATION:</p> <p>_____</p> <p>What did you see in the diagram that led you to chose that particular transformation?</p>
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3) Complete the chart.

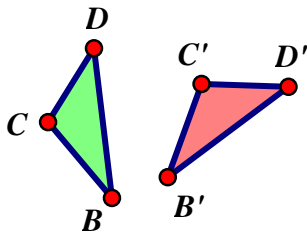
Relationship between pre-image and image	ROTATION	REFLECTION	TRANSLATION
Distances	SAME OR DIFFERENT	SAME OR DIFFERENT	SAME OR DIFFERENT
Orientation	SAME OR DIFFERENT	SAME OR DIFFERENT	SAME OR DIFFERENT
Special Points			



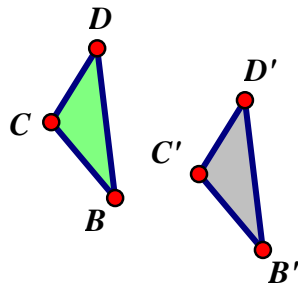


4) Which transformation has taken place?

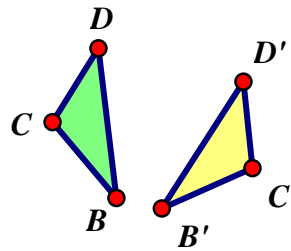
a) _____



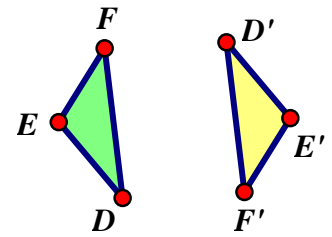
b) _____



c) _____



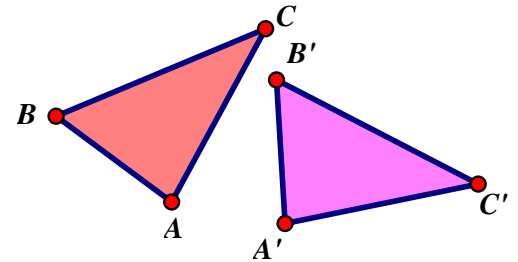
d) _____



5) Given that $\triangle ABC$ was mapped to $\triangle A'B'C'$ using a single transformation.

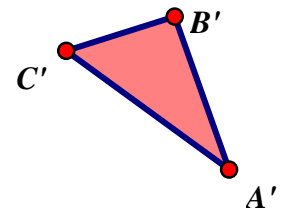
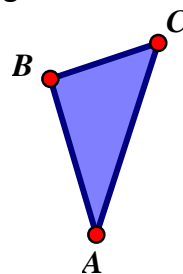
a) Why couldn't this mapping have resulted by a single translation?

b) What transformation must have mapped these two triangles?
Explain your answer.



6) $\triangle ABC$ is congruent to $\triangle A'B'C'$. A student tries to determine which of these single transformations mapped $\triangle ABC$ onto $\triangle A'B'C'$. She concludes that a reflection had to be involved and more than one transformation had to map these on two triangles.

a) How can she conclude that a reflection was involved?



b) How can she conclude that this wasn't just a single reflection?

7) If after a reflection $BB' = 6$ cm. How far is point B from the line of reflection?

8) If after a rotation $A = A'$, what does that tell you about point A ?