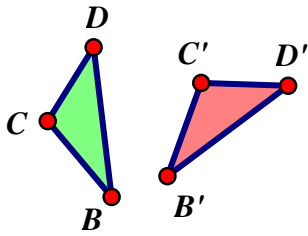


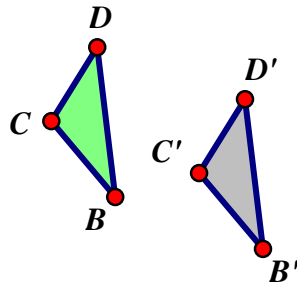
**Problem Set 4-12 LAB**

1. Which transformation has taken place?

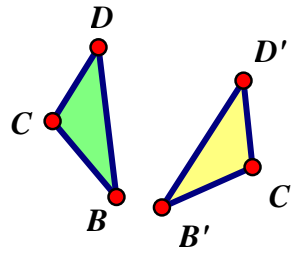
a) \_\_\_\_\_



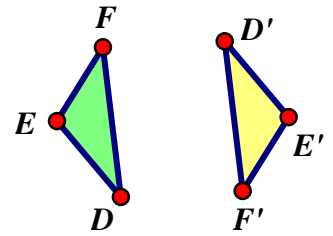
b) \_\_\_\_\_



c) \_\_\_\_\_



d) \_\_\_\_\_

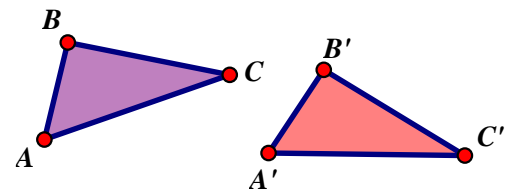


2. Complete the chart.

Relationship between pre-image and image	TRANSLATION	SINGLE LINE REFLECTION	POINT REFLECTION; ROTATION 180°	ROTATION
Orientation - Direct or Indirect				
Location of Invariant Points				
What to look for				

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

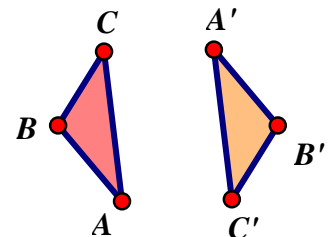
a) Why couldn't this mapping have resulted by a single translation?



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

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

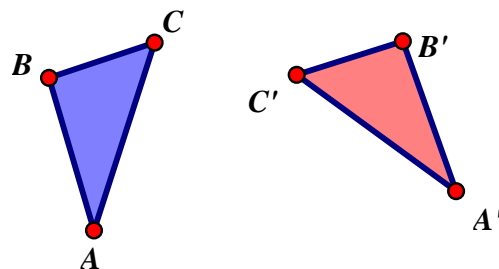
a) Use orientation to explain why this mapping could not have resulted from a single line reflection:



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

5.  $\triangle ABC$  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 line reflection was involved



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

c) How can she conclude that this wasn't just a point reflection?

6.  $\overline{BC}$  was translated by the given vector.

a) Explain why  $\overline{BC} \cong \overline{B'C'}$ .

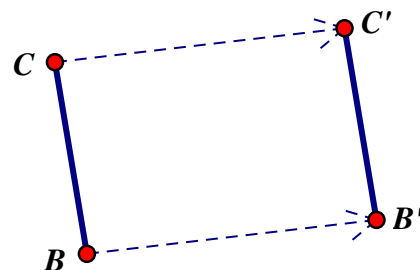
b) What other segments in the diagram are congruent? \_\_\_\_\_

Why?

c) Explain why  $\overline{BC} \parallel \overline{B'C'}$ .

b) What other segments in the diagram are parallel? \_\_\_\_\_

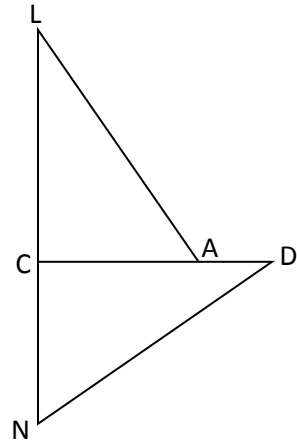
Why?



**PROBLEM SET 4-13L**

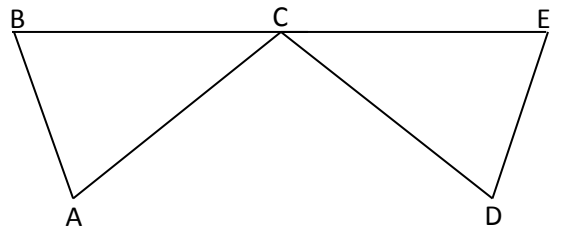
1. **Given:**  $\triangle LAC \cong \triangle DNC$

Identify a precise series of rigid motions  $\triangle LAC$  onto  $\triangle DNC$ .



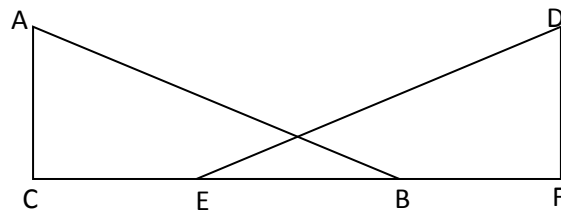
2. **Given:**  $\triangle DEC \cong \triangle ABC$

Identify a precise series of rigid motions that maps  $\triangle DEC$  onto  $\triangle ABC$ .



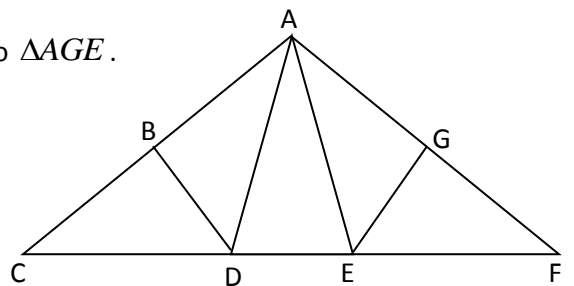
3. **Given:**  $\triangle ABC \cong \triangle DEF$

Identify a precise series of rigid motions that maps  $\triangle ABC$  onto  $\triangle DEF$ .



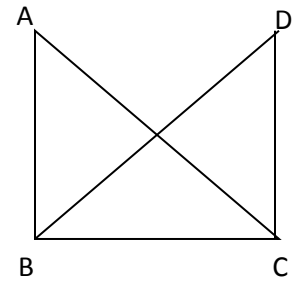
4. **Given:**  $\triangle ABD \cong \triangle AGE$

Identify a precise series of rigid motions that maps  $\triangle ABD$  onto  $\triangle AGE$ .



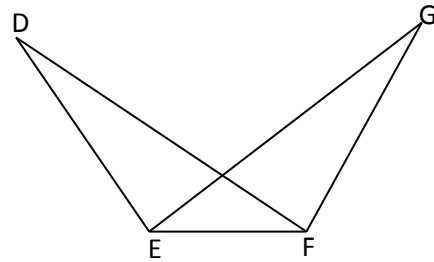
5. **Given :**  $\triangle ABC \cong \triangle DCB$

Identify a precise series of rigid motions that maps  $\triangle ABC$  onto  $\triangle DCB$ .



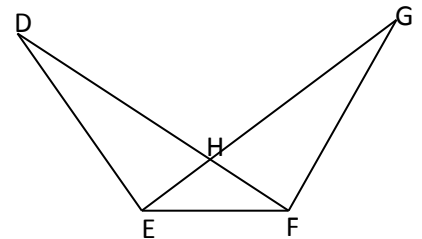
6. **Given :**  $\triangle DEF \cong \triangle GFE$

Identify a precise series of rigid motions that maps  $\triangle DEF$  onto  $\triangle GFE$ .



7. **Given :**  $\triangle DHE \cong \triangle GHF$

Identify a precise series of rigid motions that maps  $\triangle DHE$  onto  $\triangle GHF$ .



8. **Given :**  $\triangle JLP \cong \triangle JNK$

Identify a precise series of rigid motions that maps  $\triangle JLP$  onto  $\triangle JNK$ .

