Translations with Patty Paper

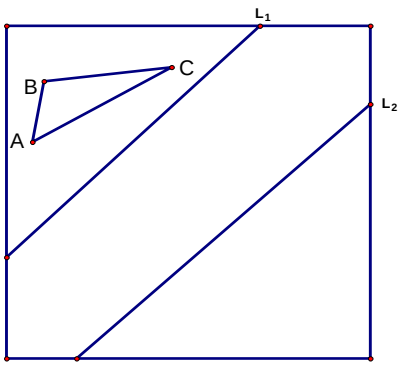

FIG. 1

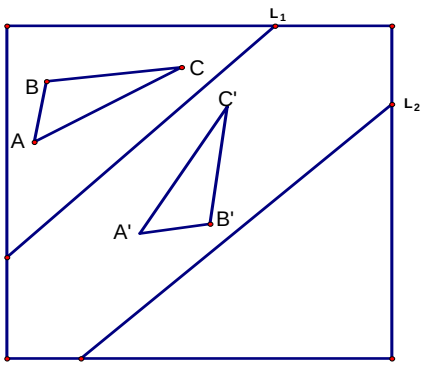

FIG. 2

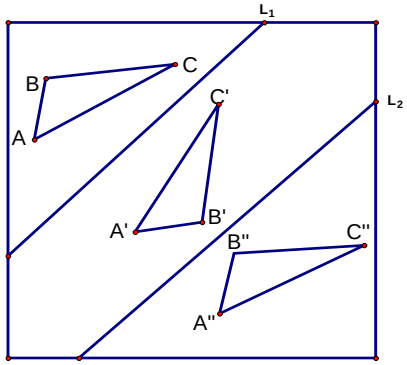

FIG. 3

Instructions:

1. Draw two parallel lines on a piece of patty paper as shown above and label L_1 and L_2.

2. Draw a scalene triangle in the top left hand corner and label ABC (clockwise).

3. Fold the patty paper along L_1 so that triangle ABC is on the outside. Trace the image of triangle ABC on the opposite side of the paper and label A'B'C'.

4. Fold the patty paper along L_2 so that triangle A'B'C' is on the outside. Trace the image of triangle A'B'C' on the opposite side of the paper and label A''B''C''.

Observations:

5. How do triangle ABC and triangle A'B'C' compare? What stayed the same? What changed?

6. How do the measures of corresponding angles compare? corresponding sides?

7. Draw a segment from A to A", B to B", and C to C". How do the lengths of these segments compare? What is the relationship among these segments? How do you know?

8. How do the perimeters of triangle ABC and triangle A"B"C" compare?

9. How do the areas of these triangles compare?

10. What properties have been preserved in this transformation?

11. How would you describe a reflection with respect to two parallel lines?