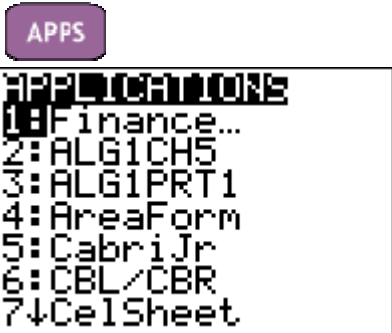

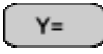

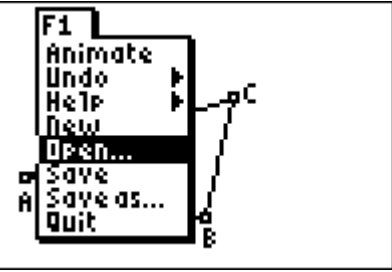

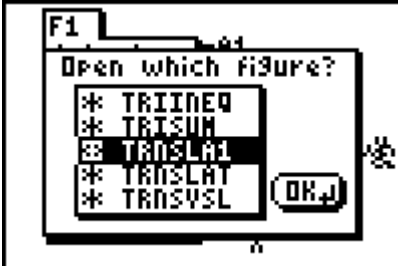

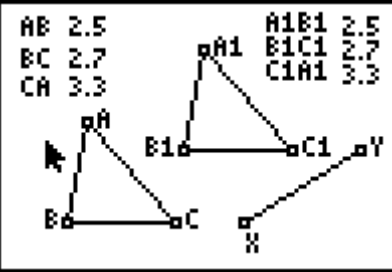


Student Worksheet for G.G.55 Investigate, justify, and apply the properties that remain invariant under a translation. Distance and Orientation

<p>After turning on your handheld press</p> 	<p>Select CabriJr.</p> 
<p>  scroll down to Open</p> 	<p> scroll to TRNSLA1</p> 
<p></p> 	<p><math>\Delta A_1B_1C_1</math> is the image of <math>\Delta ABC</math> under a translation generated by segment <math>XY</math>.</p> <p>The lengths of the sides of the triangles have been indicated.</p> <p>You will select, grab and drag the vertices of <math>\Delta ABC</math>, points <math>X</math> and <math>Y</math> and draw conclusions about the image <math>\Delta A_1B_1C_1</math>.</p>

1.) Select, grab and drag points A, B, C.

What is changing? \_\_\_\_\_

What is remaining the same? \_\_\_\_\_

2.) Select grab and drag segment XY.

What is changing? \_\_\_\_\_

What is remaining the same? \_\_\_\_\_

3.) Select grab and drag point X or point Y.

What is changing? \_\_\_\_\_

What is remaining the same? \_\_\_\_\_

4) As you select, grab and drag point A, B, C, X, Y stop and record 5 successive trials by entering the distances in the table below.

Trial #	AB	A1B1	BC	B1C1	CA	C1A1
1						
2						
3						
4						
5						

5) What seems to be true about the distances AB and A1B1? \_\_\_\_\_

6) Name any other pairs of segments that share this same property. \_\_\_\_\_

7) Under the transformation rotation about a point is distance preserved?

\_\_\_\_\_

8) In your own words explain what it means when a property is preserved.

\_\_\_\_\_

9) In  $\triangle ABC$  as you move from point A to point B to point C is this movement clockwise or counterclockwise? \_\_\_\_\_

10) In  $\triangle A1B1C1$  as you move from point A1 to point B1 to point C1 is this movement clockwise or counterclockwise? \_\_\_\_\_

11) This movement helps us to define the **orientation** of the pre-image and the image.

Is orientation preserved under a translation? \_\_\_\_\_