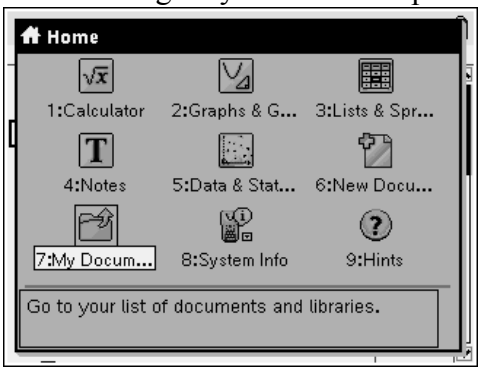
Student Worksheet for G.G.55 Investigate, justify, and apply the properties that remain invariant under a translation. Angle Measure

<table>
<tr>
<td>After turning on your handheld press
 
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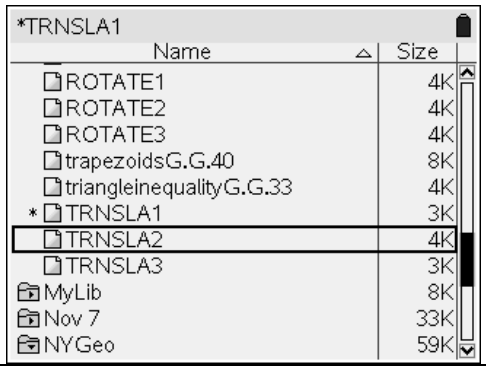
<td>Select My documents
Open Folder Geometry NY
Select TRNSLA2
 
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 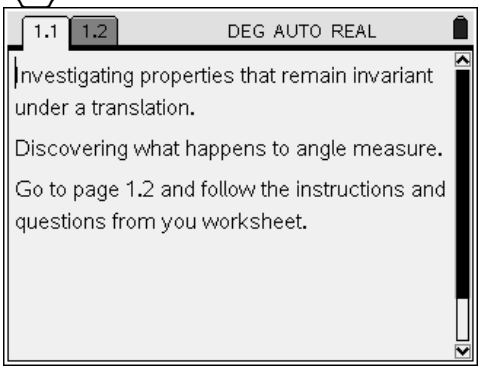
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 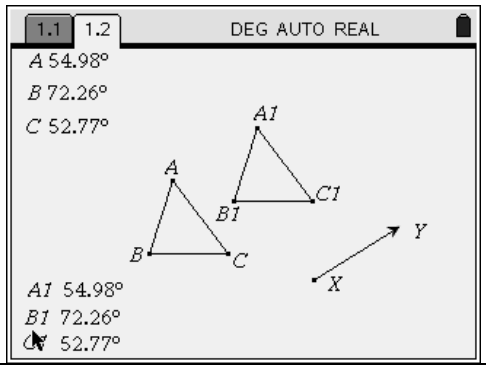
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<td>ΔA1B1C1 is the image of ΔABC under a translation generated by segment XY.

The measures of the angles of the triangles have been indicated.</td>
<td>You will select, grab and drag the vertices of ΔABC, points X and Y and draw conclusions about the image ΔA1B1C1.</td>
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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) Select, grab and drag point A, B, C, X or Y. As you move the point, stop and record 5 successive trials by entering the measures of the angles in the table below.

Trial #	$\angle ABC$	$\angle A1B1C1$	$\angle BCA$	$\angle B1C1A1$	$\angle CAB$	$\angle C1A1B1$
1						
2						
3						
4						
5						

5) What seems to be true about the measures of $\angle ABC$ and $\angle A1B1C1$?

_____

6) Name two other pairs of angles that demonstrate this same property.

_____

7) Under a translation, is angle measure preserved? _____

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

_____