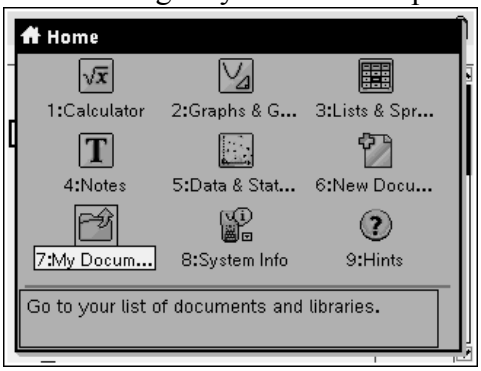
TI-Nspire Student Worksheet for G.G.55 Investigate, justify, and apply the properties that remain invariant under rotation about a point. ANGLE MEASURE

<table>
<tr>
<td>After turning on your handheld press 
 
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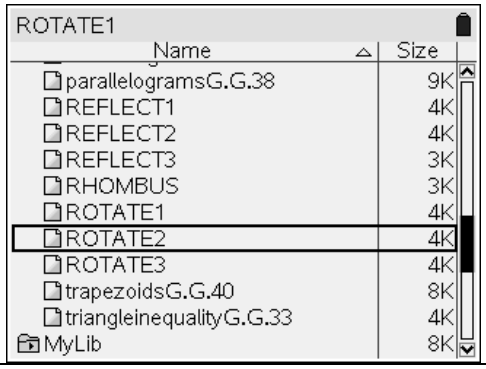
<td>Select My documents 
Open Folder Geometry NY
Select ROTATE2
 
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 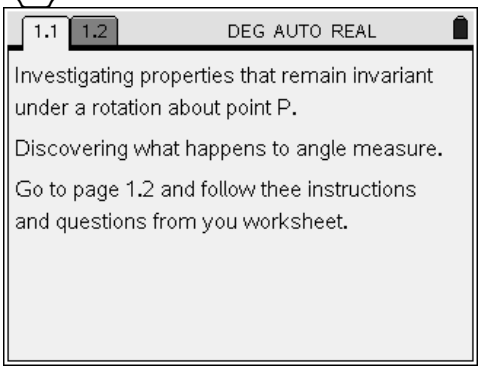
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 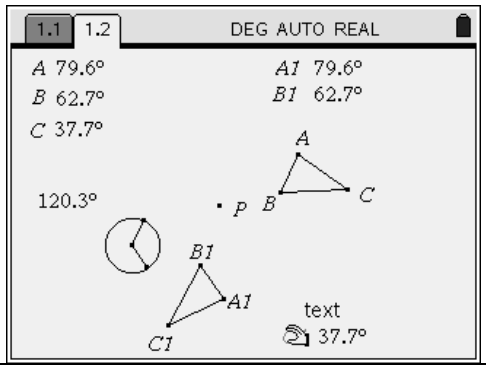
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<td>ΔA1B1C1 is the image of ΔABC under a rotation about point P.

The measures of the angles of the triangles have been indicated.</td>
<td>You will move the vertices of ΔABC and the radius points on the circle to draw conclusions about the image ΔA1B1C1</td>
</tr>
</table>

1.) Select, grab and drag either radius point on the circle

What is changing? _____

What is remaining the same? _____

2.) Select, grab and drag point A.

What is changing? _____

What is remaining the same? _____

3.) Select, grab and drag point B.

What is changing? _____

What is remaining the same? _____

4.) Select, grab and drag point A, B, C or either radius point. As you move your selected 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						

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

_____

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

_____

6.) Under the transformation glide reflection is angle measure preserved?

_____

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

_____