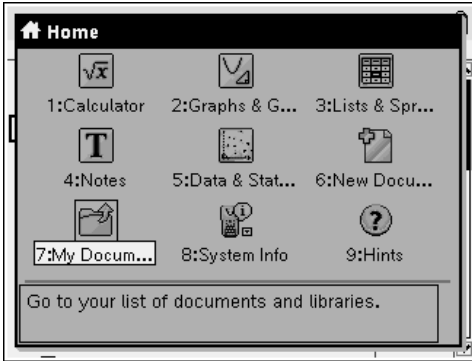


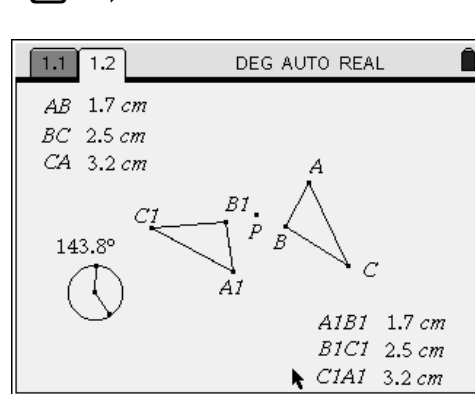
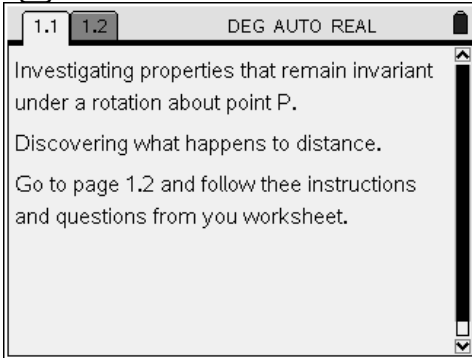
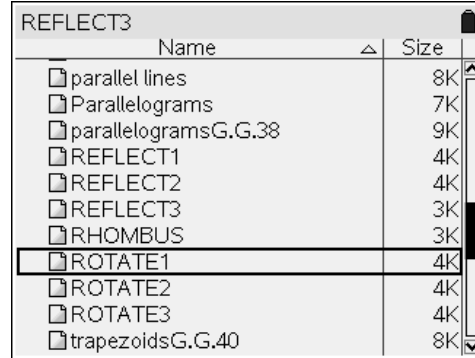
TI-Nspire Student Worksheet for G.G.55 Investigate, justify, and apply the properties that remain invariant under rotation about a point. Distance

After turning on your handheld press



Select My documents 7

Open Folder Geometry NY
Select ROTATE1



$\Delta A_1B_1C_1$ is the image of ΔABC under a rotation about point P.
The lengths of the sides of the triangles have been indicated.

You will select, grab and drag one of the radius points on the circle and you will move the vertices of ΔABC and draw conclusions about the image $\Delta A_1B_1C_1$

1.) Select, grab and drag either of the radius points 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? _____

3) As you select, grab and drag point A, B, C or any radius point 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						

4) What seems to be true about the distances AB and A1B1? _____

5) Name any other pairs of segments that share this same property. _____

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

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