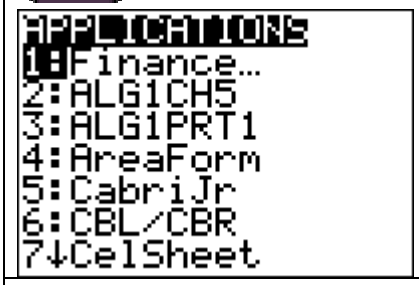
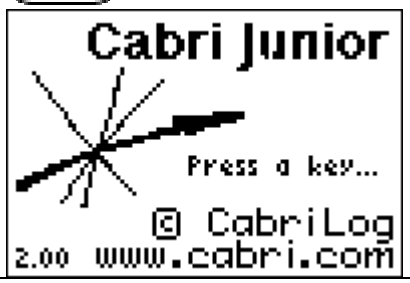
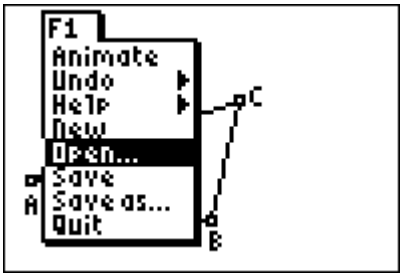
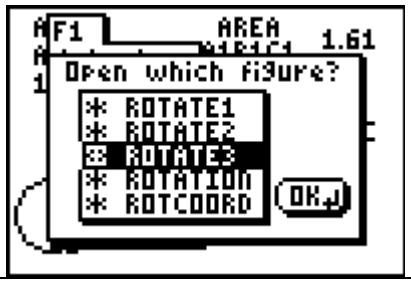
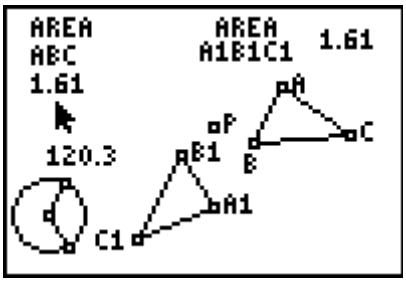
Student Worksheet for G.G.55 Investigate, justify, and apply the properties that remain invariant under rotation about a point. AREA

After turning on your handheld press APPS  	Select CabriJr. 5 
Y=  scroll down to Open  	ENTER scroll to ROTATE3 
ENTER  	ΔA1B1C1 is the image of ΔABC under a rotation about point P. The areas of the triangles have been indicated. You will move the vertices of ΔABC and either radius point to draw conclusions about the image ΔA1B1C1

1.) Select, grab and drag either radius point.

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) 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 Number	Area of ΔABC	Area of ΔA1B1C1
1		
2		
3		
4		
5		

4) What seems to be true about the areas of ΔABC and ΔA1B1C1?

_____

5) Under the transformation, rotation about a point, is area preserved?

_____

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

_____