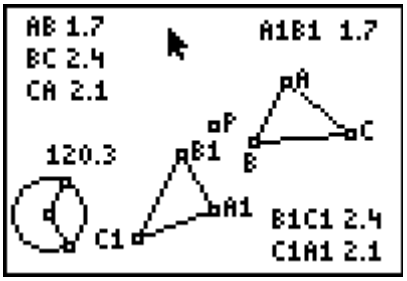
Teacher Notes

G.G.55 Investigate, justify, and apply the properties that remain invariant under rotation about a point. DISTANCE

Lesson Launcher Objective:

1) Discover that distance is preserved under a rotation about a point.

Procedure:

The student opens Cabri Jr. and the APPVAR ROTATE1 	ΔA1B1C1 is the image of ΔABC under a rotation about point P. The measures of the sides of the triangles have been indicated. The student will explore the figure by dragging the vertices of the ΔABC

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

What is changing? The measures of all the sides.

What is remaining the same? The pre-image side and image side always have the same measure.

2.) Select grab and drag point A or point B.

What is changing? The measures of all the sides.

What is remaining the same? The pre-image side and image side always have the same measure.

3) Select, grab and drag point A, B, C or any radius point then 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						

Answers will vary student to student.

4) What seems to be true about the distances AB and A1B1? They are always equal.

5) Name any other pairs of segments that share this same property. BC and B1C1, CA and C1B1

6) Under the transformation glide reflection is distance preserved? yes

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

Answers will vary.