

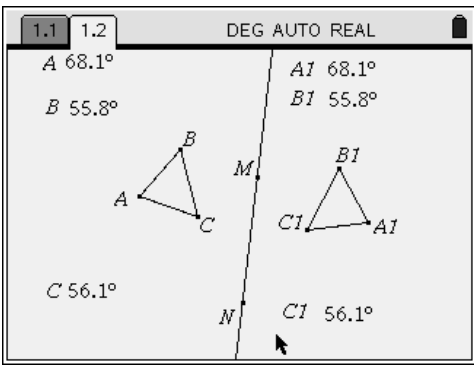
Teacher Notes

G.G.55 Investigate, justify, and apply the properties that remain invariant under reflections. ANGLE MEASURE

Lesson Launcher Objective:

- 1) Discover that angle measure is preserved under a line reflection.

Procedure:

<p>The student opens the .tns document REFLECT2</p> 	<p>$\Delta A_1B_1C_1$ is the image of ΔABC under a reflection through \overline{MN}.</p> <p>The measures of the angles of the triangles have been indicated.</p> <p>The student will explore the figure by dragging the vertices of the ΔABC</p>
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- 1.) Select grab and drag point A.

What is changing? The measures of the angles of the triangles.

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

- 2.) Select grab and drag point B.

What is changing? The measures of the angles of the triangles.

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

3) Select, grab and drag point C. As you move point C stop and record 5 successive trials by entering the measures of the angles in the table below.

Trial #	$\angle ABC$	$\angle A_1B_1C_1$	$\angle BCA$	$\angle B_1C_1A_1$	$\angle CAB$	$\angle C_1A_1B_1$
1						
2						
3						
4						
5						

Answers will vary from student to student.

4) What seems to be true about the measures of $\angle ABC$ and $\angle A_1B_1C_1$? They are always equal.

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

$\angle BCA$ and $\angle B_1C_1A_1$, $\angle CAB$ and $\angle C_1A_1B_1$

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

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

Answers will vary.