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

| After turning on your handheld press <br> APPS | Select CabriJr. $\square$ <br> 5 |
| :---: | :---: |
|  |  |
| $Y=$ scroll down to Open | $\square$ scroll to GLIDRFL3 |
|  |  |
| ENTER | $\triangle \mathrm{A} 1 \mathrm{~B} 1 \mathrm{C} 1$ is the image of $\triangle \mathrm{ABC}$ under a glide reflection. |
|  | The measures of the angles of the triangles have been indicated. <br> You will move the vertices of $\triangle \mathrm{ABC}$ and drawn conclusions about the image $\Delta \mathrm{A} 1 \mathrm{~B} 1 \mathrm{C} 1$ |

1.) Select grab and drag point $A$.

What is changing? $\qquad$
What is remaining the same? $\qquad$
2.) Select grab and drag point $B$.

What is changing? $\qquad$
What is remaining the same?
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 \# | $\angle A B C$ | $\angle A 1 B 1 C 1$ | $\angle B C A$ | $\angle B 1 C 1 A 1$ | $\angle C A B$ | $\angle C 1 A 1 B 1$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |

4) What seems to be true about the measures of $\angle A B C$ and $\angle A 1 B 1 C 1$ ?
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.
