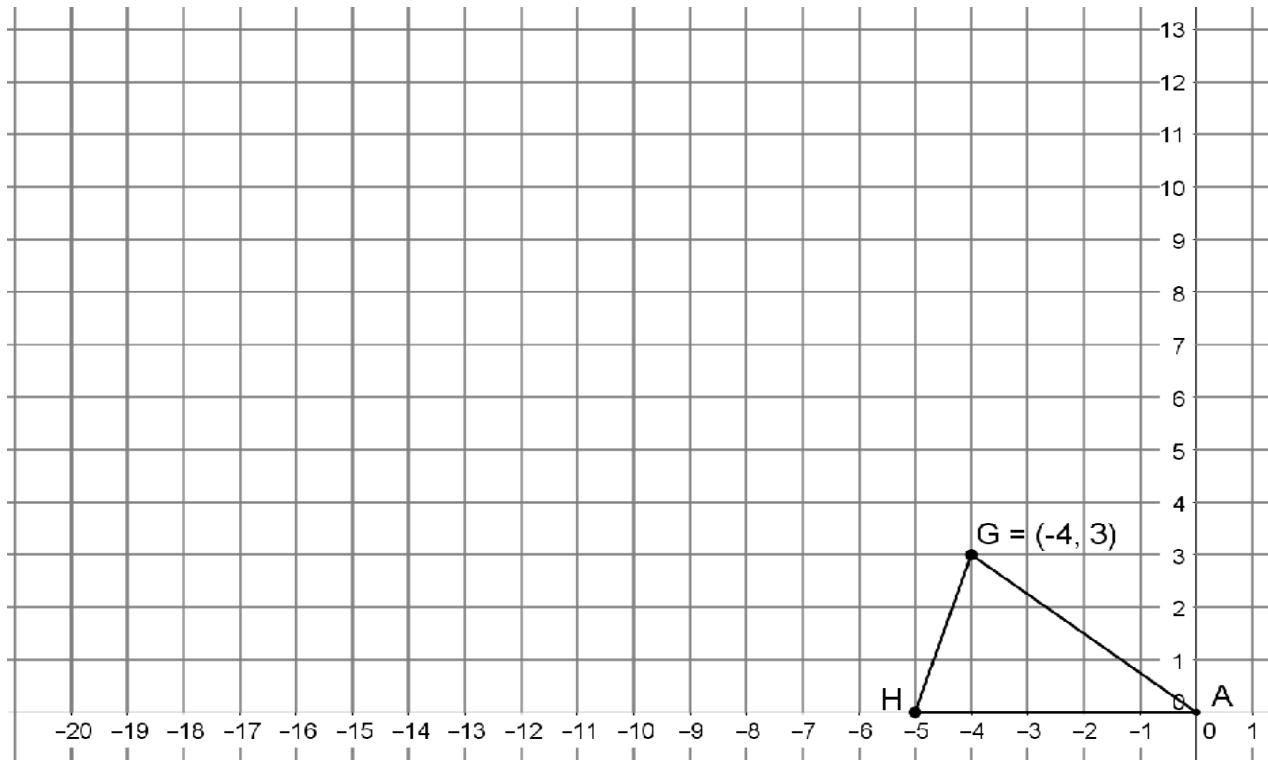**Geometry – Dilations** Name _____

7a: Homework Pd _____ Date _____

In the coordinate plane below, the scale used on both axes is 1 unit. The vertices of ΔAGH are at the origin, (-4, 3) and (-5, 0).

1. Dilate ΔAGH about the origin using a scale factor of 4 to form ΔARS such that ΔAGH~ΔARS.

2. Determine the slopes of $\overline{GH}$ and $\overline{RS}$. What can you conclude about the relationship between $\overline{GH}$ and $\overline{RS}$?

3. Determine AG and AR.

4. Determine the area of ΔARS and ΔAGH.

5. Determine the measure of ∠G and ∠S .

6. Without doing any further computations, find the measure of all the other angles in both triangles.