NAME:_____

1. Describe two instances of dilation images in the real world.

[1] _____

2. The negative on a 35-mm roll of film is 1 in. by $1\frac{1}{2}$ in. Common print sizes are 3 in. by 5 in. and 4 in. by 6 in. Is either size a dilation of the negative? Explain.

[2] _____

3. Describe a way to use lines to check that a dilation from ΔABC to $\Delta A'B'C'$ is correct.

[3] _____

4. Make a conjecture about the coordinates of a point (x, y) under a dilation centered at $(0, 0)$ with a scale factor of $s > 0$.

[4] _____

5. In ΔABC, $m\angle C > m\angle B$. A dilation with center X outside of ΔABC and scale factor 2 maps $ABC \rightarrow A'B'C'$. What is true about the relationship between $A'B'$ and $A'C'$ under this dilation? Explain.

[5] _____

[1] Answers may vary. Samples: photo enlargement or microfilm

[2] Yes, the 4×6; the scale factor is 4.

[3] Draw lines through $O(0, 0)$ and A, B, and C. If the dilation is correct, $\overleftrightarrow{OA}$ should contain A', $\overleftrightarrow{OB}$ should contain B', and $\overleftrightarrow{OC}$ should contain C'.

[4] The coordinates of the point will be (sx, sy).

[5] $A'B' > A'C'$ because $m\angle C$ is still greater than $m\angle B$ under the dilation.