**How to “Make” (?) a Dilation**

1. Familiarize yourself with the sketch. There are no sliders. Figure out what the numbers in the top right represent. DO NOT CLICK ON THE HINTS UNTIL ASKED TO.

2. The sketch says that a dilation has occurred. Explain why this is true.

2b. Is is a dilation of or is is a dilation of ? Justify.

3. Drag any of the vertices of the triangles. Try to create two triangles that are dilations of one another (you can’t use both of the original triangles). Follow these instructions:

* If you successfully get two triangles, raise your hand to signal the teacher and await further instructions.
* If you cannot get two triangles within five minutes, click “Hint 1.”
* If you cannot get two triangles within 2 more minutes, click “Hint 2.”
* If you cannot get two triangles within 2 more minutes, click “Hint 3.”
* If you cannot get two triangles within 2 more minutes, signal the teacher if they have not already worked with you.

4. Describe how you created the triangles. What relationships had to hold in order for the two triangles to be dilations of each other?

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Two possible explanations suffice. First is the fact that all of the sides of triangle A’B’C’ are twice as large as those of triangle ABC. Secondly, if you connect the lines between corresponding vertices, the lines intersect at a single point.

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Either can be argued; one is a dilation with scale factor 2 and the other with scale factor ½ (both with the same center).

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The ratios of corresponding side lengths ALL had to be equal.