### Lesson 10 Practice Problems

1. Triangle $ABC$ is dilated using $D$ as the center of dilation with scale factor 2.
* The image is triangle $A^{′}B^{′}C^{′}$. Clare says the two triangles are congruent, because their angle measures are the same. Do you agree? Explain how you know.
* 
1. On graph paper, sketch the image of quadrilateral PQRS under the following dilations:
	1. The dilation centered at $R$ with scale factor 2.
	2. The dilation centered at $O$ with scale factor $\frac{1}{2}$.
	3. The dilation centered at $S$ with scale factor $\frac{1}{2}$.
* 
1. Quadrilateral $ABCD$ is dilated with center $\left(0,0\right)$, taking $B$ to $B^{′}$. Draw $A^{′}B^{′}C^{′}D^{′}$.
* 
1. Triangles $B$ and $C$ have been built by dilating Triangle $A$.
* 
	1. Find the center of dilation.
	2. Triangle $B$ is a dilation of $A$ with approximately what scale factor?
	3. Triangle $A$ is a dilation of $B$ with approximately what scale factor?
	4. Triangle $B$ is a dilation of $C$ with approximately what scale factor?
1. Here is a triangle.
	1. Draw the dilation of triangle $ABC$, with center $\left(0,0\right)$, and scale factor 2. Label this triangle $A^{′}B^{′}C^{′}$.
	2. Draw the dilation of triangle $ABC$, with center $\left(0,0\right)$, and scale factor $\frac{1}{2}$. Label this triangle $A^{″}B^{″}C^{″}$.
	3. Is $A^{″}B^{″}C^{″}$ a dilation of triangle $A^{′}B^{′}C^{′}$? If yes, what are the center of dilation and the scale factor?
* 
*
1. The diagram shows three lines with some marked angle measures.
* 
* Find the missing angle measures marked with question marks.
* (From Unit 1, Lesson 12.)



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