### Lesson 9 Practice Problems

1. Here is triangle $ABC$.
* 
	1. Dilate each vertex of triangle $ABC$ using $P$ as the center of dilation and a scale factor of 2. Draw the triangle connecting the three new points.
	2. Dilate each vertex of triangle $ABC$ using $P$ as the center of dilation and a scale factor of $\frac{1}{2}$. Draw the triangle connecting the three new points.
	3. Measure the longest side of each of the three triangles. What do you notice?
	4. Measure the angles of each triangle. What do you notice?
1. Segment $AB$ measures 3 cm. Point $O$ is the center of dilation. How long is the image of $AB$ after a dilation with . . .
	1. Scale factor 5?
	2. Scale factor 3.7?
	3. Scale factor $\frac{1}{5}$?
	4. Scale factor $s$?
2. Here are points $A$ and $B$. Plot the points for each dilation described.
* 
	1. $C$ is the image of $B$ using $A$ as the center of dilation and a scale factor of 2.
	2. $D$ is the image of $A$ using $B$ as the center of dilation and a scale factor of 2.
	3. $E$ is the image of $B$ using $A$ as the center of dilation and a scale factor of $\frac{1}{2}$.
	4. $F$ is the image of $A$ using $B$ as the center of dilation and a scale factor of $\frac{1}{2}$.
1. Make a perspective drawing. Include in your work the center of dilation, the shape you dilate, and the scale factor you use.



© CC BY Open Up Resources. Adaptations CC BY IM.