### Lesson 17 Practice Problems

1. Select **all** the points that are on the line through $\left(0,5\right)$ and $\left(2,8\right)$.
	1. $\left(4,11\right)$
	2. $\left(5,10\right)$
	3. $\left(6,14\right)$
	4. $\left(30,50\right)$
	5. $\left(40,60\right)$
2. Here is triangle $ABC$.
* 
	1. Draw the dilation of triangle $ABC$ with center $\left(2,0\right)$ and scale factor 2.
	2. Draw the dilation of triangle $ABC$ with center $\left(2,0\right)$ and scale factor 3.
	3. Draw the dilation of triangle $ABC$ with center $\left(2,0\right)$ and scale factor $\frac{1}{2}$.
	4. What are the coordinates of the image of point $C$ when triangle $ABC$ is dilated with center $\left(2,0\right)$ and scale factor $s$?
	5. Write an equation for the line containing all possible images of point $C$.
1. All three points displayed are on the line. Find an equation relating $x$ and $y$.
* 
1. The Empire State Building in New York City is about 1,450 feet high (including the antenna at the top) and 400 feet wide. Andre wants to make a scale drawing of the front view of the Empire State Building on an $8\frac{1}{2}$-inch-by-$11$-inch piece of paper. Select a scale that you think is the most appropriate for the scale drawing. Explain your reasoning.
	1. 1 inch to 1 foot
	2. 1 inch to 100 feet
	3. 1 inch to 1 mile
	4. 1 centimeter to 1 meter
	5. 1 centimeter to 50 meters
	6. 1 centimeter to 1 kilometer
* (From Unit 2, Lesson 7.)
1. Here are some line segments.
* 
	1. Which segment is a dilation of $\overset{¯}{BC}$ using $A$ as the center of dilation and a scale factor of $\frac{2}{3}$?
	2. Which segment is a dilation of $\overset{¯}{BC}$ using $A$ as the center of dilation and a scale factor of $\frac{3}{2}$?
	3. Which segment is not a dilation of $\overset{¯}{BC}$, and how do you know?
* (From Unit 2, Lesson 10.)



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