In this activity you will use scale factors to solve problems involving two scaled shapes. After completing the activity, discuss and/or present your findings to the rest of the class.

Activity [Page 1.3]

1. What will each of the following scale factors do to ratios of each side length of ABCDE to the corresponding side length of *A'B'C'D'E'*?

   a. scale factor of 1

   b. scale factor of $\frac{1}{2}$

   c. scale factor of 4

2. Reset the page. Be sure the scale factor is hidden. Select the right arrow and change the scale factor once. Find *AB* and *A'B'*.

   a. How can you use this information to find the scale factor?

   b. Find the lengths of *A'E'* and *E'D'*. Explain your reasoning.

3. If you know one length in figure 1 is L1 and the corresponding length in figure *A'B'C'D'E'* is L2, which of the following will give the scale factor between *ABCDE* and *A'B'C'D'E'?* To go from L1 to L2? Explain your reasoning and give an example that supports your claim using the TNS lesson.

   a. $\frac{L1}{L2}$ b. $\frac{L2}{L1}$ c. $L1+L2$ d. $\frac{(L2-L1)}{L1}$

4. Reset the page, and then hide the scale factor. Change the scale factor using the right arrow three times so that *D'E'* is off the screen. Reveal the length of segments *AB* and *A'B'*. Find the length of hidden side *D'E'* using at least two different strategies.