Lesson 3 Practice Problems

1. Segment AB measures 3 cm. Point O is the center of dilation. How long is the image of AB after a dilation with . . .

   a. Scale factor 5?

   b. Scale factor 3.7?

   c. Scale factor $\frac{1}{5}$?

   d. Scale factor s?

2. Here are points A and B. Plot the points for each dilation described.

   a. C is the image of B using A as the center of dilation and a scale factor of 2.

   b. D is the image of A using B as the center of dilation and a scale factor of 2.

   c. E is the image of B using A as the center of dilation and a scale factor of $\frac{1}{2}$.

   d. F is the image of A using B as the center of dilation and a scale factor of $\frac{1}{2}$.

3. Make a perspective drawing. Include in your work the center of dilation, the shape you dilate, and the scale factor you use.

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4. Triangle ABC is a scaled copy of triangle DEF. Side AB measures 12 cm and is the longest side of ABC. Side DE measures 8 cm and is the longest side of DEF.

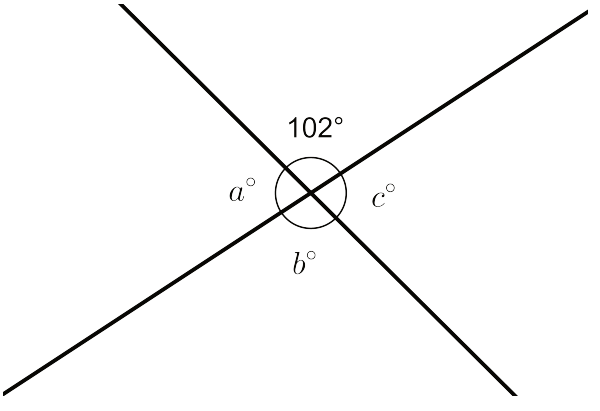
   a. Triangle ABC is a scaled copy of triangle DEF with what scale factor?

   b. Triangle DEF is a scaled copy of triangle ABC with what scale factor?

(From Unit 2, Lesson 1.)

5. The diagram shows two intersecting lines.

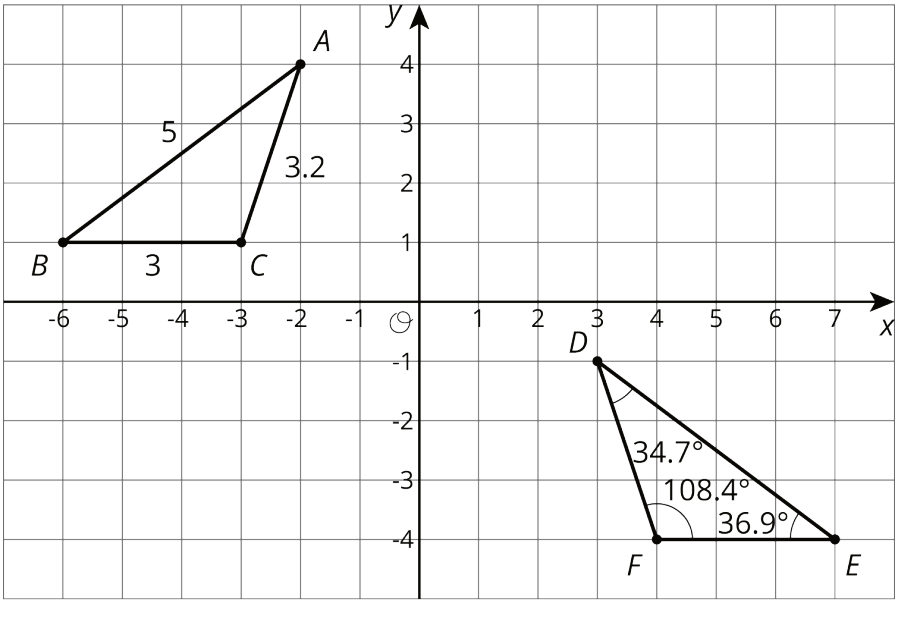
   Find the missing angle measures.



(From Unit 1, Lesson 14.)

6. a. Show that the two triangles are congruent.

   b. Find the side lengths of DEF and the angle measures of ABC.



(From Unit 1, Lesson 12.)

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