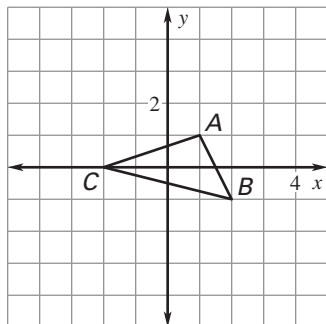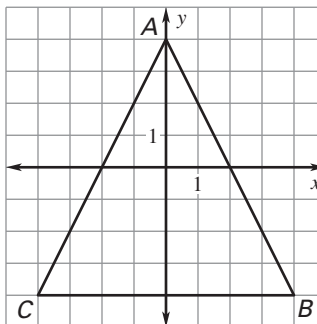**Practice B**

For use with the lesson "Perform Similarity Transformations"

Draw a dilation of the figure using the given scale factor.

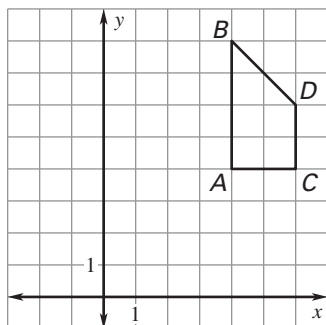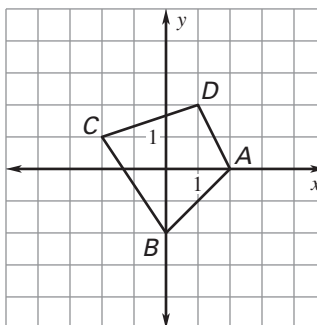**1.** $k = 2$

2. $k = \dfrac{1}{4}$
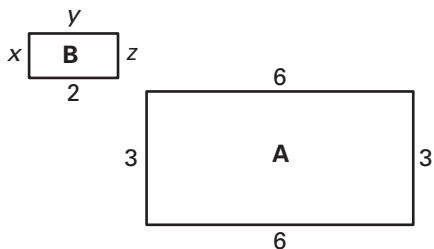

3. $k = \dfrac{1}{2}$
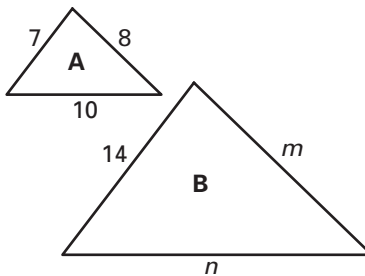

4. $k = 1\dfrac{1}{2}$

Determine whether the dilation from Figure A to Figure B is a *reduction* or an *enlargement*. Then, find the values of the variables.
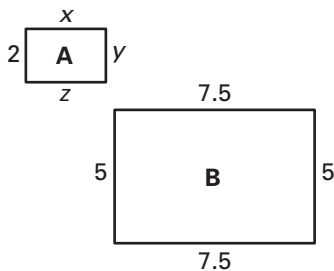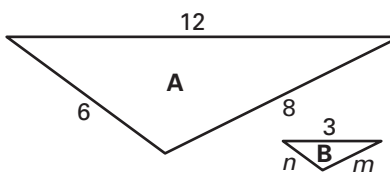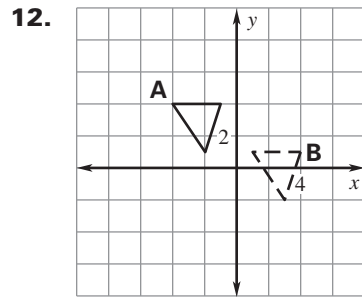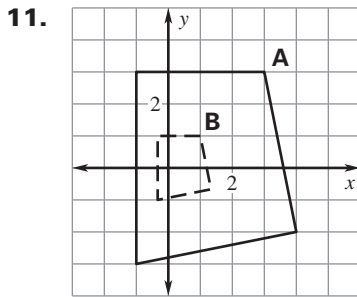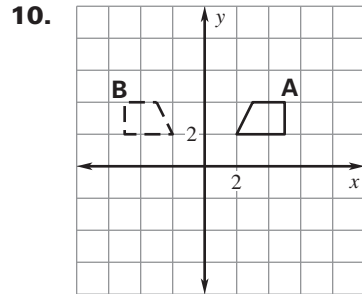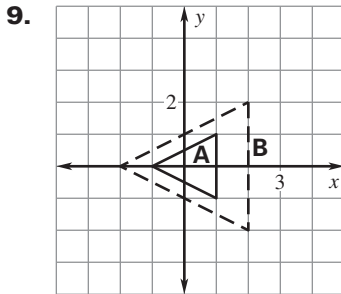
5.

6.

7.

8.

**LESSON
6.6**

Practice B *continued*

For use with the lesson "Perform Similarity Transformations"

**Determine whether the transformation from Figure A to Figure B is a
translation, *reflection*, *rotation*, or *dilation*.**

9.

10.

11.

12.

13. Overhead Projectors Your teacher draws a circle on an overhead
projector. The projector then displays an enlargement of the circle
on the wall. The circle drawn has a radius of 3 inches. The circle on
the wall has a diameter of 4 feet. What is the scale factor of the
enlargement?

14. Posters A poster is enlarged and then the enlargement is
reduced as shown in the figure.

  a. What is the scale factor of the enlargement? the reduction?

  b. A second poster is reduced directly from size A to size C.
  What is the scale factor of the reduction?

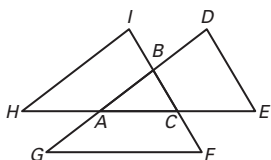 **c.** How are the scale factors in part (a) related to the scale factor
  in part (b)?

22 in.

11 in.

5.5 in.

8.5 in. | **A** | → 17 in. | **B** | → 4.25 in. | **C**
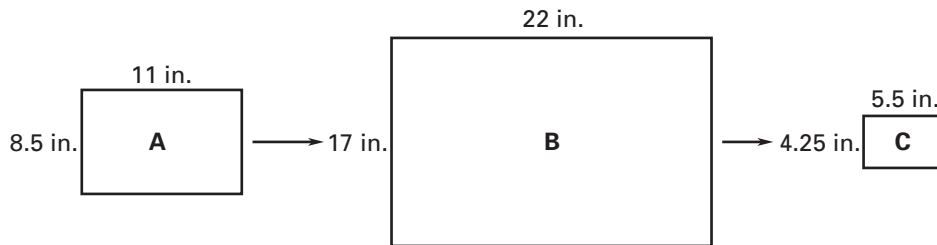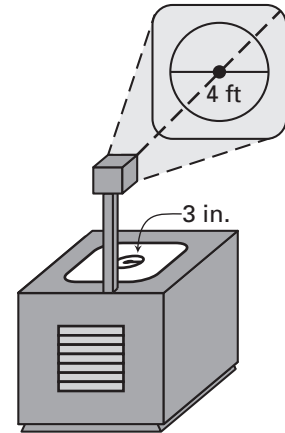
LESSON 6.6

Lesson 6.6 Perform Similarity Transformations

Teaching Guide

1. They are equal to the scale factor.

2. reduced **3.** enlarged

4. *Sample answer:* $\triangle AED$, $\triangle EBF$, $\triangle DFC$
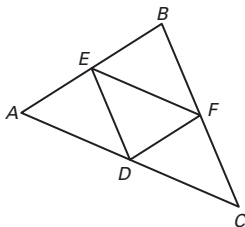
5. *Sample answer:* $\triangle ADE$, $\triangle GBF$, $\triangle HIC$
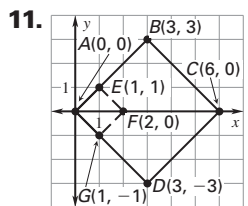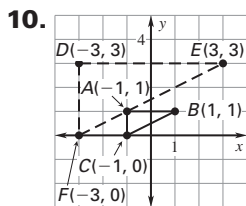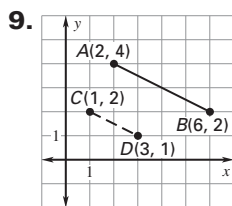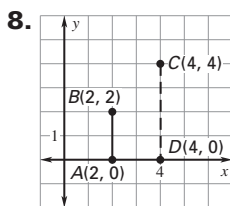

Technology Activity

1. Yes. $\triangle ABC \sim \triangle PQR$ by the SSS Similarity Theorem. **2.** $m\angle A = 47.49°$, $m\angle B = 37.75°$, $m\angle C = 94.76°$, $m\angle M = 47.49°$, $m\angle N = 37.75°$, and $m\angle O = 94.76°$. Yes. $\triangle ABC \sim \triangle MNO$ by the AA Similarity Postulate.

Practice Level A

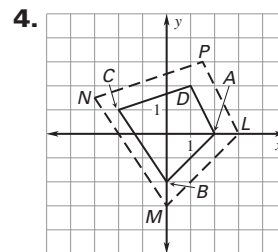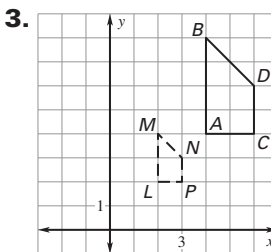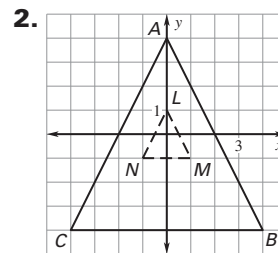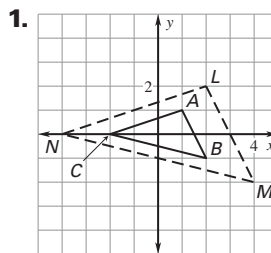**1.** enlargement **2.** reduction **3.** enlargement

4. reduction **5.** $C(2, 2)$, $D(6, 2)$

6. $C(3, 3)$, $D(6, 9)$ **7.** $C(0, 0)$, $D(-15, 10)$

8.

9.

10.

11.

12. 3 **13.** $\frac{2}{3}$ **14.** 5 **15.** reduction; $\frac{1}{3}$

16. enlargement; $\frac{5}{2}$ **17.** reduction; $\frac{1}{3}$

18. enlargement; $\frac{4}{3}$ **19.** dilation **20.** translation

21. no; The new screen is not similar to the old screen, because $\frac{15}{9} \neq \frac{20}{6}$. **22.** yes; The dilation is an enlargement with a scale factor of 3.

Practice Level B

1.

2.

3.

4.

5. reduction; $x = 1$, $y = 2$, $z = 1$

6. enlargement; $m = 16$, $n = 20$

7. enlargement; $x = 3$, $y = 2$, $z = 3$

8. reduction; $m = 2$, $n = 1.5$ **9.** dilation

10. reflection **11.** dilation **12.** translation **13.** 8

14. a. 2; $\frac{1}{4}$ **b.** $\frac{1}{2}$ **c.** The scale factor in part (b) is the product of the scale factors in part (a).

Practice Level C

1.

2.