

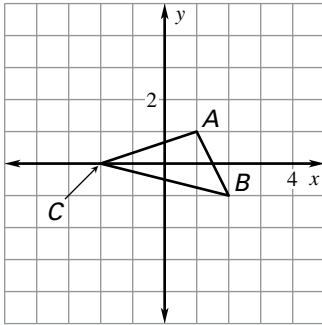
LESSON 6.7

Practice B

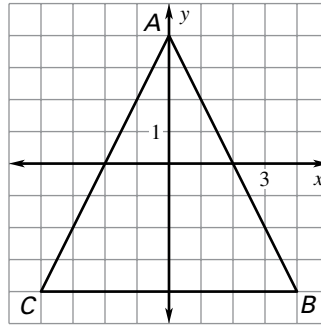
For use with pages 424–431

Draw a dilation of the figure using the given scale factor k . Verify that the figure and its image are similar.

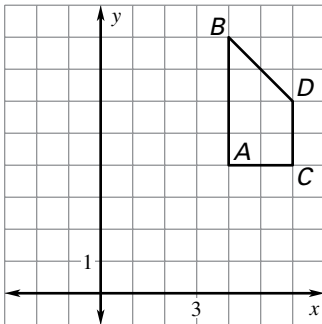
1. $k = 2$



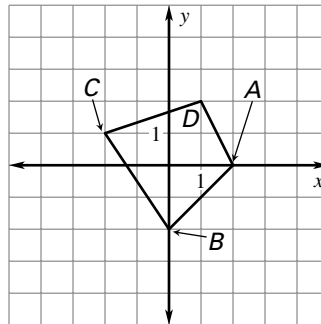
2. $k = \frac{1}{4}$



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

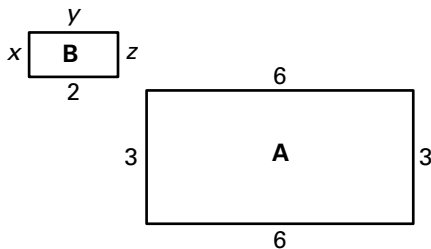


4. $k = 1\frac{1}{2}$

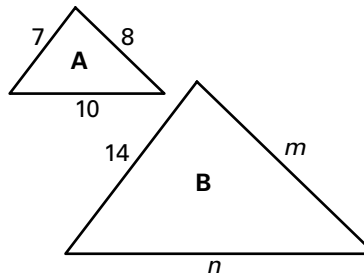


Determine whether the dilation from Figure A to Figure B is a reduction or an enlargement. Then, find the values of the variables.

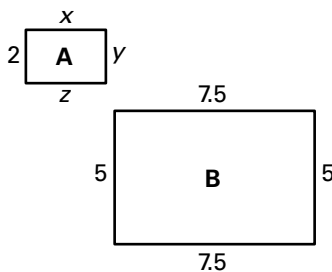
5.



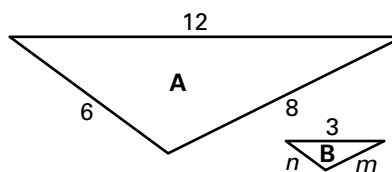
6.



7.



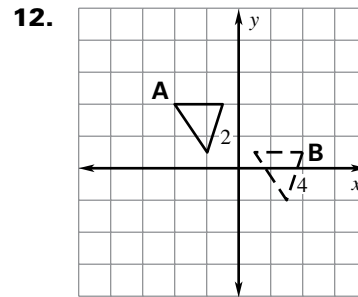
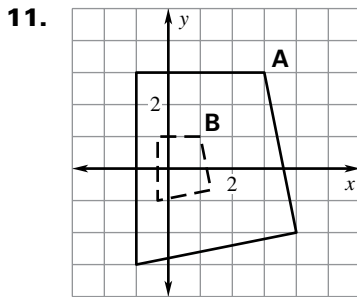
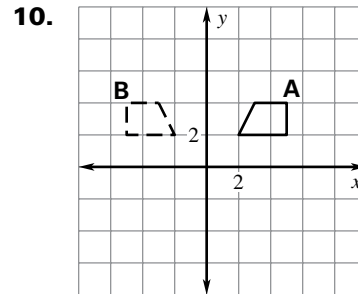
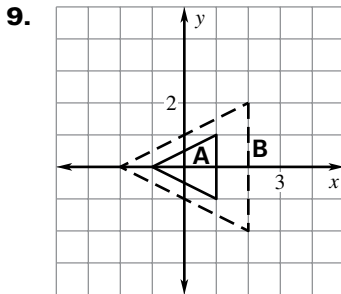
8.



LESSON 6.7

Practice B *continued*
For use with pages 424–431

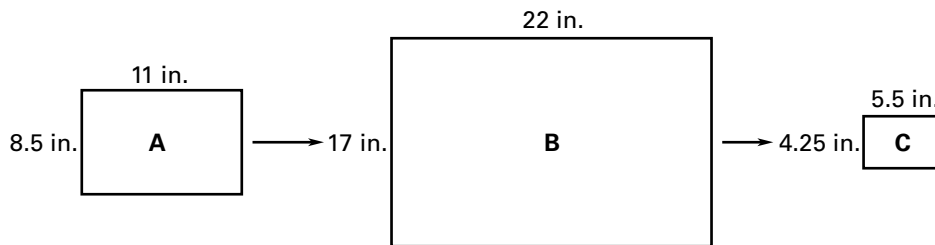
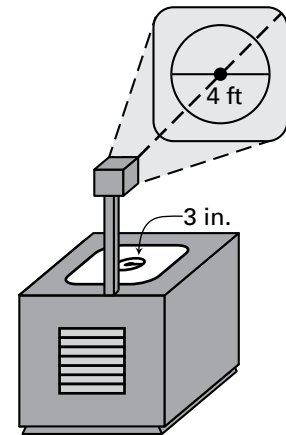
Determine whether the transformation from Figure A to Figure B is a translation, reflection, rotation, or dilation.



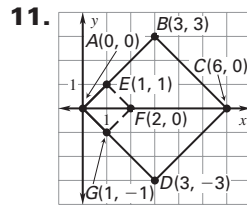
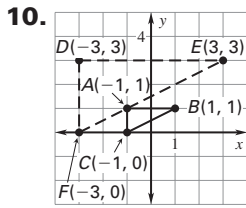
13. Overhead Projectors Your teacher draws a circle on an overhead projector. The projector then displays an enlargement of the circle on the wall. The circle drawn has a radius of 3 inches. The circle on the wall has a diameter of 4 feet. What is the scale factor of the enlargement?

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

- What is the scale factor of the enlargement? the reduction?
- A second poster is reduced directly from size A to size C. What is the scale factor of the reduction?
- How are the scale factors in part (a) related to the scale factor in part (b)?

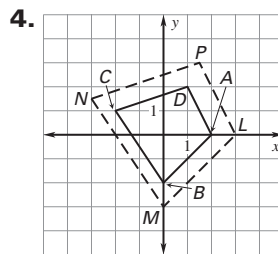
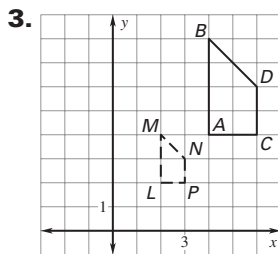
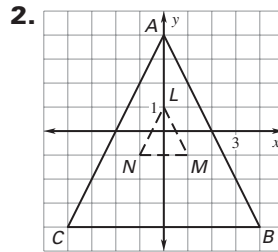
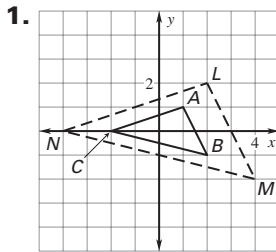


Lesson 6.7, continued



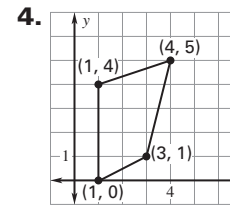
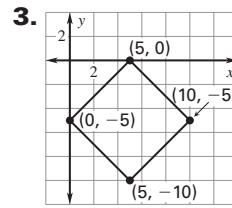
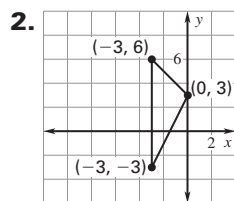
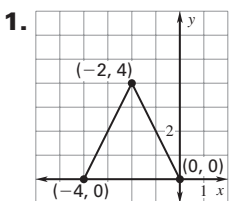
12. 3 13. $\frac{2}{3}$ 14. 5 15. reduction; $\frac{1}{3}$
 16. enlargement; $\frac{5}{2}$ 17. reduction; $\frac{1}{3}$
 18. enlargement; $\frac{4}{3}$ 19. dilation 20. translation
 21. no; The new screen is not similar to the old screen, because $\frac{15}{9} \neq \frac{20}{6}$. 22. yes; The dilation is an enlargement with a scale factor of 3.

Practice Level B



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

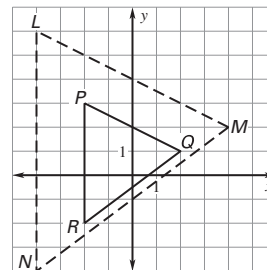


5. reduction; $\frac{6}{7}$ 6. enlargement; $\frac{4}{3}$ 7. no 8. no
 9. image of $M: (-\frac{2}{3}, \frac{4}{3})$, of $N: (\frac{4}{3}, \frac{8}{3})$, of $L: (4, 0)$
 10. image of $G: (-5, 5)$, of $H: (0, 15)$,
 of $I: (20, \frac{25}{2})$, of $J: (15, \frac{5}{2})$
 11. original coordinates for $M: (0, 9)$,
 for $N: (6, 12)$, for $L: (12, 0)$
 12. original coordinates for $I: (1, \frac{1}{3})$, for $G: (\frac{5}{3}, \frac{7}{3})$,
 for $H: (3, 1)$

13. a. 12 in. by 18 in. b. $\frac{3}{1}$ c. 3 in. on the right and left sides, 4 in. on the top and bottom sides

Review for Mastery

1. $L(-4, 6), M(4, 2), N(-4, -4)$



2. $L(1, 0), M(1, 1), N(2, 2)$

