Name _____ Date _____

If you turn this in on time: do the odds.
If you turn this in late or
you are doing it over: do the evens.

Student score:
How well do you feel you understand this learning target:
A
B
C
D
F

Teacher Score:

LESSON 6.7

Practice A

For use with pages 408–415

State whether a dilation using the scale factor *k* results in a *reduction* or an *enlargement* of the original figure.

1. $k = 3$ **2.** $k = \frac{1}{3}$ **3.** $k = \frac{5}{4}$ **4.** $k = 0.93$

***A* and *B* are the endpoints of $\overline{AB}$. Complete the coordinates of *C* and *D*, the endpoints of the image $\overline{CD}$ after a dilation of scale factor *k*.**

5. $A(1, 1), B(3, 1), k = 2$

$(x, y) \rightarrow (2x, 2y)$

$A(1, 1) \rightarrow C(\_?\_, \_?\_)$

$B(3, 1) \rightarrow D(\_?\_, \_?\_)$

6. $A(4, 4), B(8, 12), k = \frac{3}{4}$

$(x, y) \rightarrow \left(\frac{3}{4}x, \frac{3}{4}y\right)$

$A(4, 4) \rightarrow C(\_?\_, \_?\_)$

$B(8, 12) \rightarrow D(\_?\_, \_?\_)$

7. $A(0, 0), B(-3, 2), k = 5$

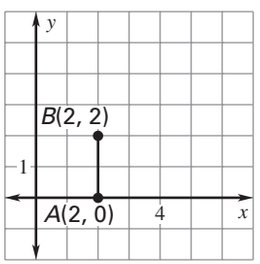
$(x, y) \rightarrow (5x, 5y)$

$A(0, 0) \rightarrow C(\_?\_, \_?\_)$

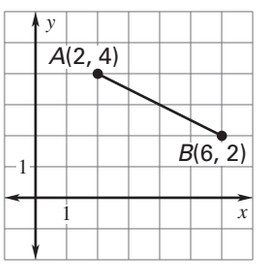
$B(-3, 2) \rightarrow D(\_?\_, \_?\_)$

Draw a dilation of the figure with the given vertices using the given scale factor *k*.

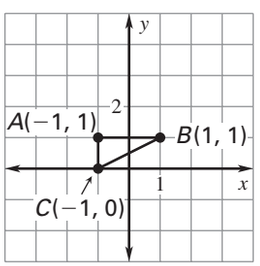
8. $A(2, 2), B(2, 0); k = 2$



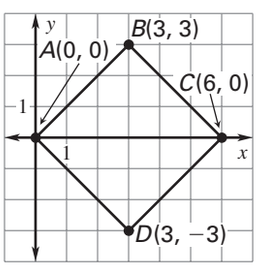
9. $A(2, 4), B(6, 2); k = \frac{1}{2}$



10. $A(-1, 1), B(1, 1), C(-1, 0); k = 3$



11. $A(0, 0), B(3, 3), C(6, 0), D(3, -3); k = \frac{1}{3}$



Point *A* is a vertex of a polygon. Point *R* is the image of *A* after a dilation. Find the scale factor of the dilation.

12. $A(3, 4), R(9, 12)$ **13.** $A(9, 12), R(6, 8)$ **14.** $A(-2, -3), R(-10, -15)$

Name _____ Date _____

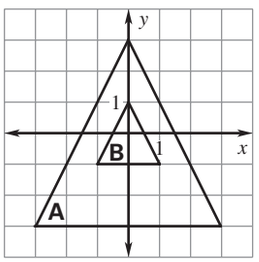
LESSON 6.7

Practice A *continued*

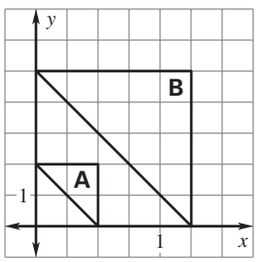
For use with pages 408–415

Determine whether the dilation from Figure A to Figure B is a *reduction* or an *enlargement*. Then find its scale factor.

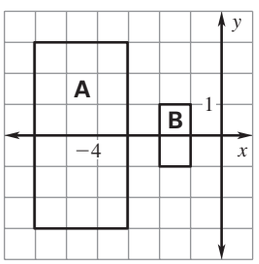
15.



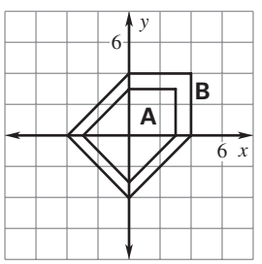
16.



17.

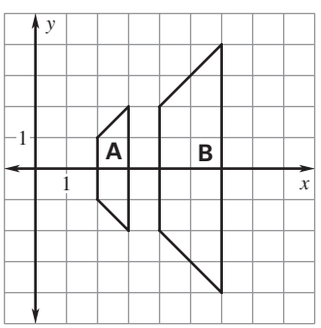


18.

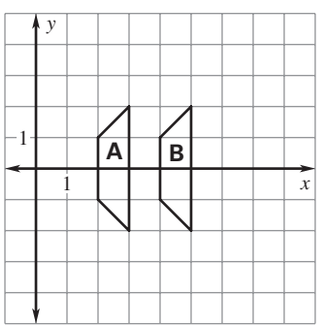


Determine whether the transformation from Figure A to Figure B is a *translation*, *reflection*, *rotation*, or *dilation*.

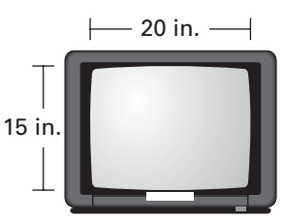
19.



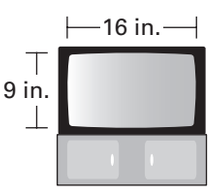
20.



21. Television Screens The screen on your old television is 20 inches wide and 15 inches high. The screen on your new widescreen television is 16 inches wide and 9 inches high. Is the screen on your new TV a dilation of the screen on your old TV? *Explain*.



Old Screen



New Screen

22. Painting You are using a photograph that is 4 inches wide and 6 inches high to paint a portrait of a friend on a canvas that is 1 foot wide and 18 inches high. Are the dimensions of the portrait a dilation of the dimensions of the photograph? If so, state the scale factor. If not, *explain* why not.