Geometry CP
6.7 Dilations Worksheet   Name _____

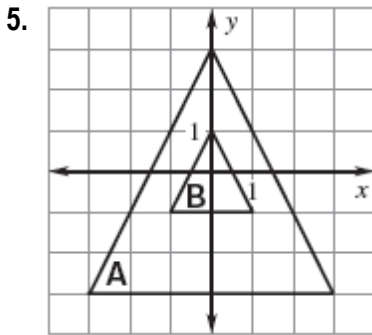**State whether a dilation with the given scale factor is a reduction or an enlargement.**
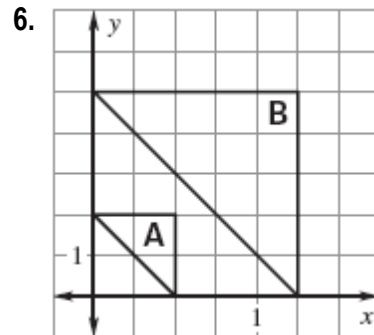**1.** k = 3   **2.** k = $\frac{1}{3}$ **3.** k = $\frac{5}{4}$ **4.** k = 0.93
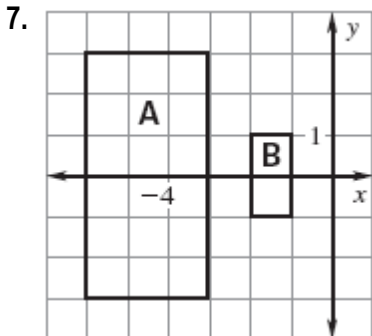
Determine whether the dilation from Figure A to Figure B is a *reduction* or an *enlargement*. Then find its scale factor.
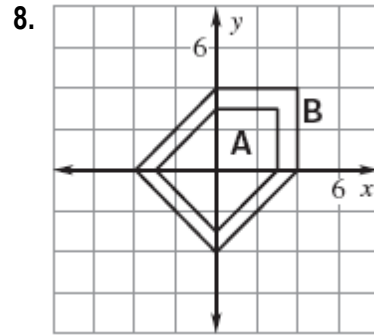
5.

_____ k = _____

6.

_____ k = _____

7.

_____ k = _____

8.

_____ k = _____

Point A is a vertex of a polygon. Point R is the image of A after the dilation. Find the scale factor of the dilation.
9. A (3, 4) and R (9, 12)   **10.** A (9, 12) and R (6, 8)   **11.** A (-2, -3) and R (-10, -15)

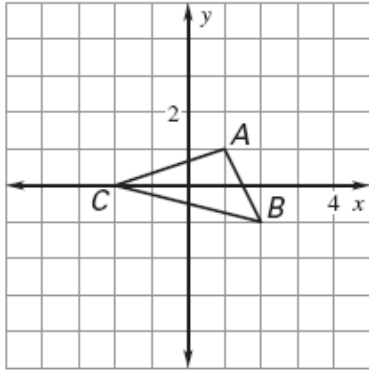**A line segment has the given endpoints. Use the scale factor to write the ordered pairs after the dilation.**
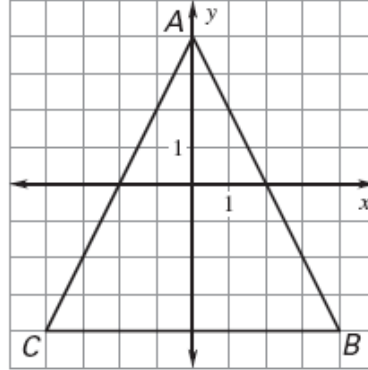**12.** A(1,1), B (3, 1), and k = 2   **13.** A(4,4), B(8, 12), and k = ¾   **14.** A(0, 0), B(-3, 2), and k = 5

Draw a dilation of the figure using the given scale factor.
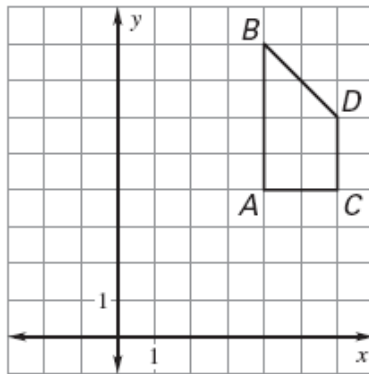
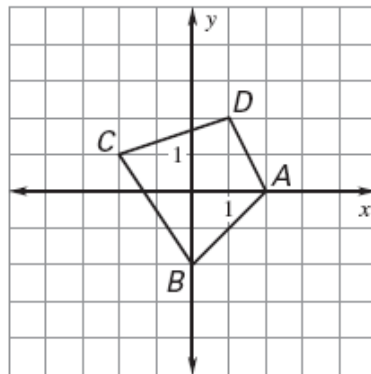**15.** k = 2

16. k = ¼

17. k = ½

18. k = 1 ½

19. k = 2
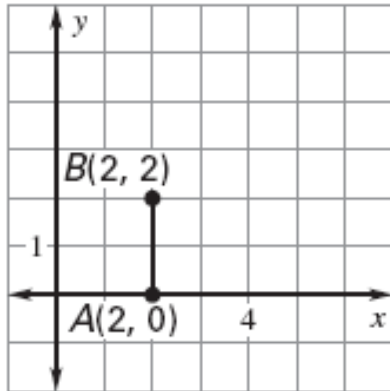
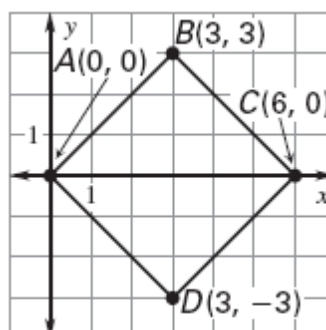**20.** k = ½
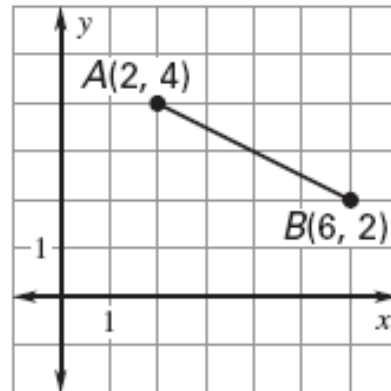
21. k = 3
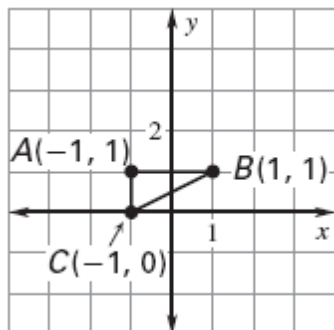
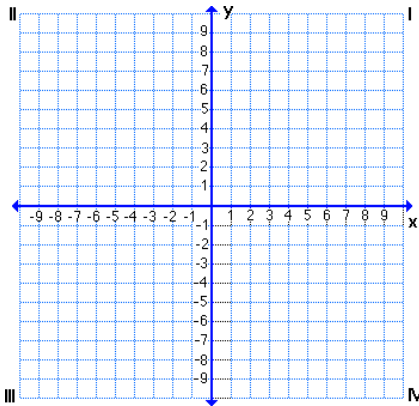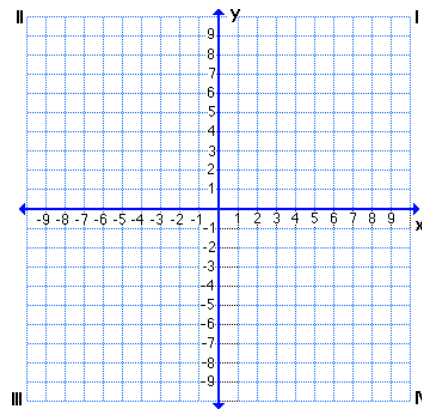**22.** k = 1/3

Draw a dilation of the polygon with the given vertices using the given scale factor. Plot the ordered pairs on the coordinate plane AND the dilation.

23. A(-2, 1), B(-4, 1), C(-2, 4); k = 2

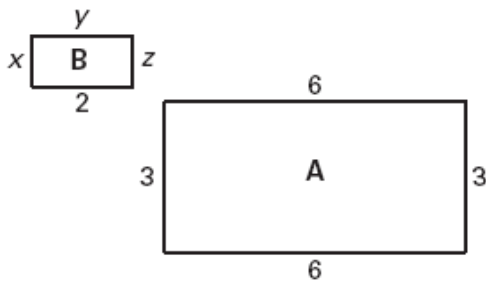**24.** A(-5, 5), B(-5, 10), C(10, 0); k = 3/5

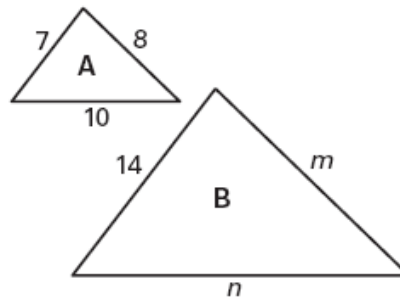**Determine whether the dilation from Figure A to Figure B is a reduction or an enlargement. Then, find the values of the variables.**
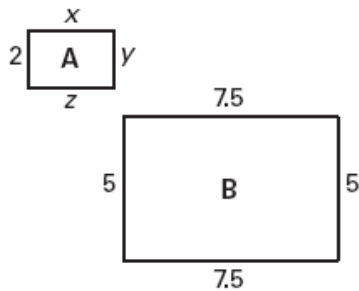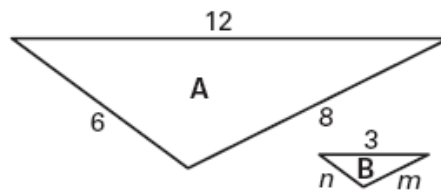
25.

26.

27.

28.

29. 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