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 enlargement

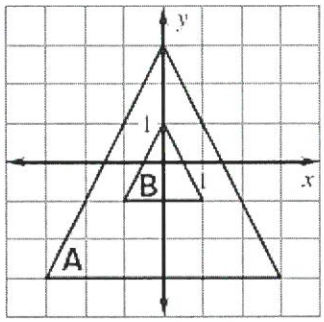
2. $k = \frac{1}{3}$ reduction

3. $k = \frac{5}{4}$ enlargement

4. k = 0.93 reduction

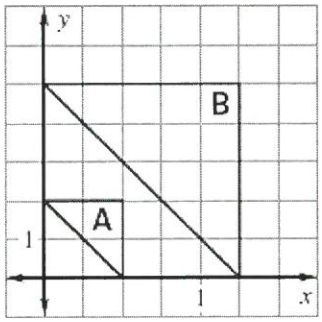
Determine whether the dilation from Figure A to Figure B is a *reduction* or an *enlargement*. Then find its scale factor.

5.



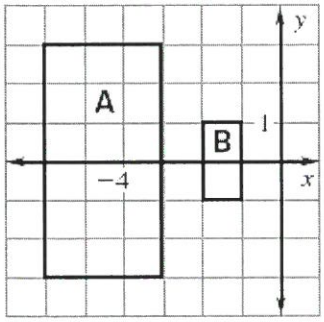
reduction k = 1/3

6.



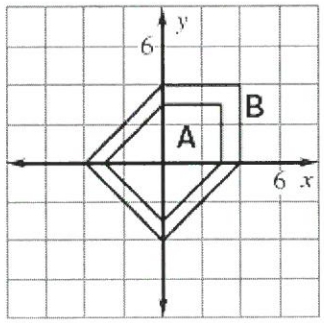
enlargement k = 2.5

7.



reduction k = 1/3

8.



enlargement k = 4/3

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) 3

10. A (9, 12) and R (6, 8) 2/3

11. A (-2, -3) and R (-10, -15) 5

A line segment has the given endpoints. Use the scale factor to write the ordered pairs after the dilation.

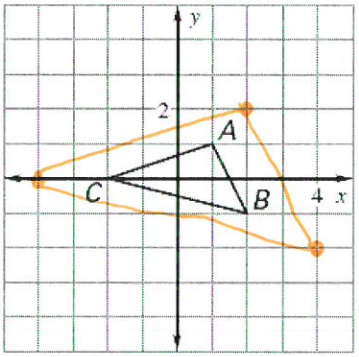
12. A(1,1), B (3, 1), and k = 2 A(2,2) B(6,2)

13. A(4,4), B(8, 12), and k = ¾ A(3,3) B(6,9)

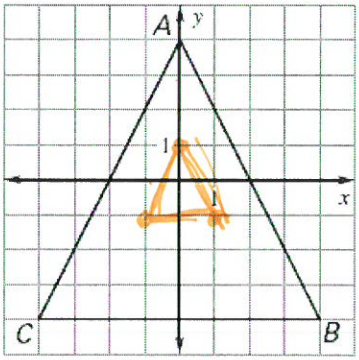
14. A(0, 0), B(-3, 2), and k = 5 A(0,0) B(-15,10)

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

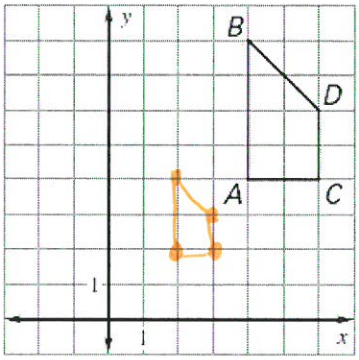
15. k = 2



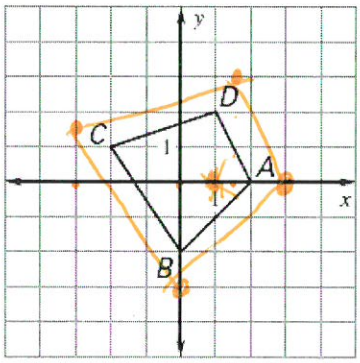
16. k = ¼



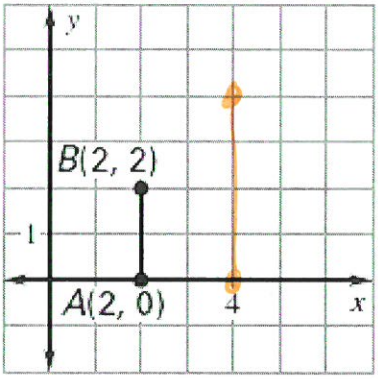
17. k = ½



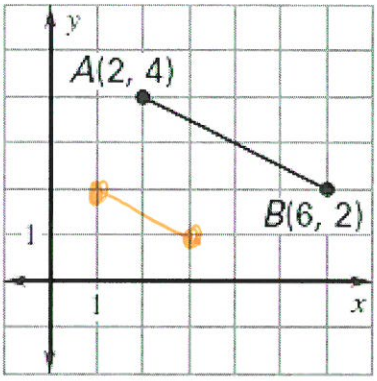
18. k = 1 ½



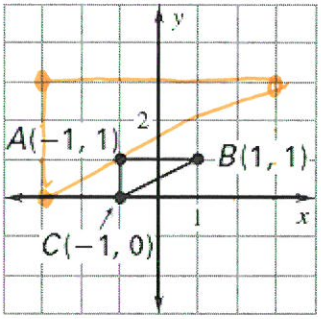
19. k = 2



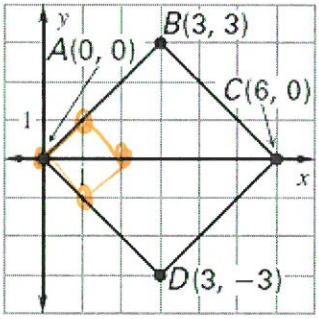
20. k = ½



21. k = 3

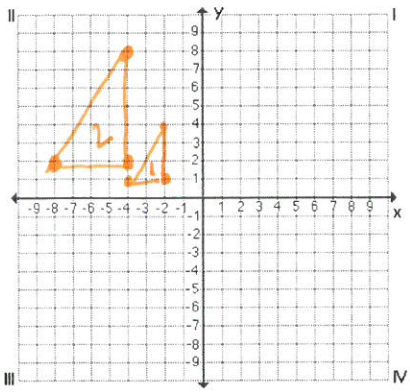


22. k = 1/3

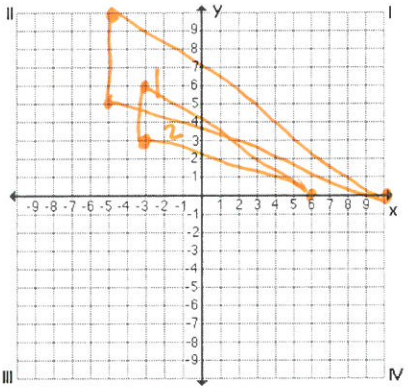


Draw a dilation of the polygon with the given vertices using the given scale factor. Plot the ordered pairs on the coordinate plane AND the dilation.

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

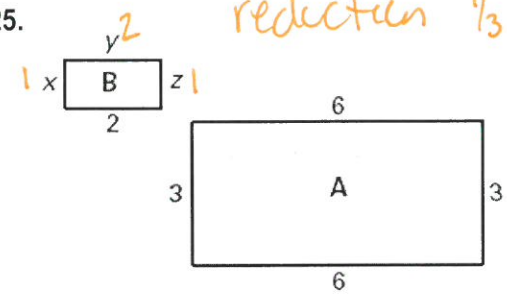


24. A(-5, 5), B(-5, 10), C(10, 0); k = 3/5

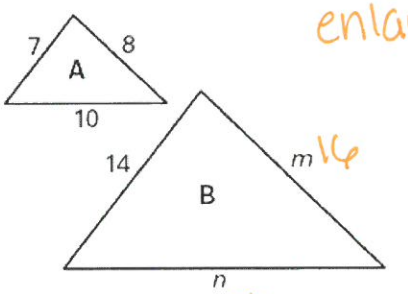


Determine whether the dilation from Figure A to Figure B is a reduction or an enlargement. Then, find the values of the variables.

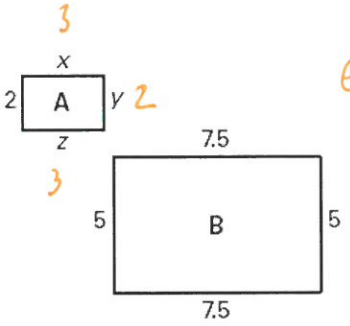
25. reduction 1/3



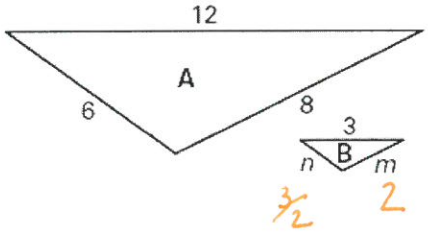
26. enlargement 2



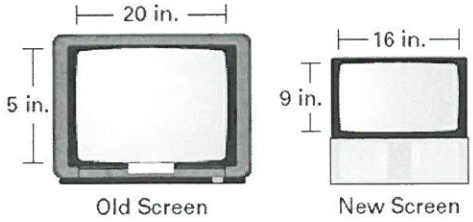
27. enlargement



28. reduction 1/4



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.



No, See ms lambert to check answer