

Assignment #9.7b

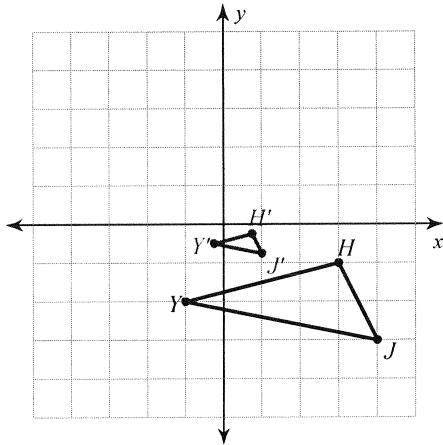
Find the coordinates of the vertices of each figure after the given transformation.

- 1) translation: 4 units left and 3 units down
 $W(1, 1), L(3, 3), N(2, 0)$
- 2) translation: 6 units left and 5 units up
 $G(1, -4), V(3, -3), N(3, -4)$
- 3) translation: $(x, y) \rightarrow (x - 3, y - 6)$
 $I(1, 2), Y(1, 5), B(5, 4)$
- 4) translation: $(x, y) \rightarrow (x - 2, y - 6)$
 $F(-3, 2), C(-2, 5), L(0, 4)$
- 5) translation: $(3, -5)$
 $C(-4, 0), W(-3, 5), H(-1, 0)$
- 6) translation: $(-6, -4)$
 $K(3, 0), W(2, 4), U(4, 5), F(5, 0)$
- 7) reflection across the x-axis
 $G(2, 1), T(3, 4), J(4, 4), H(4, 3)$
- 8) reflection across the y-axis
 $C(-1, -4), F(0, 1), U(4, -2), X(3, -3)$
- 9) reflection across the y-axis
 $J(-4, -2), D(-5, 3), H(-1, 3), P(0, -1)$
- 10) reflection across the x-axis
 $X(-4, -1), I(-3, 3), W(-2, 2), N(-3, -3)$
- 11) reflection across $y = x$
 $Y(-4, 2), M(-4, 4), G(0, 2), I(-3, -1)$
- 12) reflection across $y = x$
 $C(-2, -3), G(-3, 1), I(1, -2)$
- 13) rotation 90° counterclockwise about the origin
 $T(-3, -5), H(-4, -2), R(-2, 0), J(2, -3)$
- 14) rotation 180° about the origin
 $Z(2, 3), R(3, 5), F(5, 3)$
- 15) rotation 180° about the origin
 $Q(-2, -2), Y(-3, 1), U(1, 1), M(1, -3)$
- 16) rotation 90° counterclockwise about the origin
 $R(1, 4), B(5, 5), V(4, 1)$

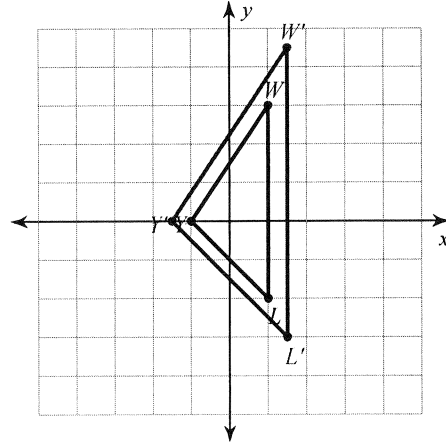
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Write a rule to describe each transformation.

1)

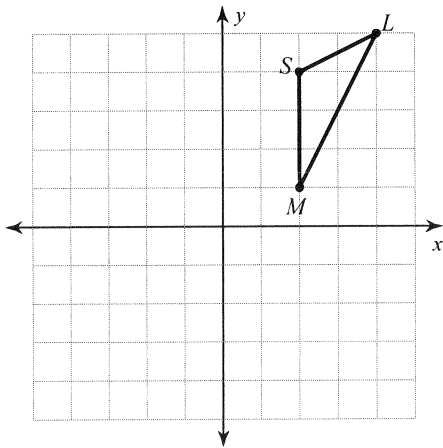


2)

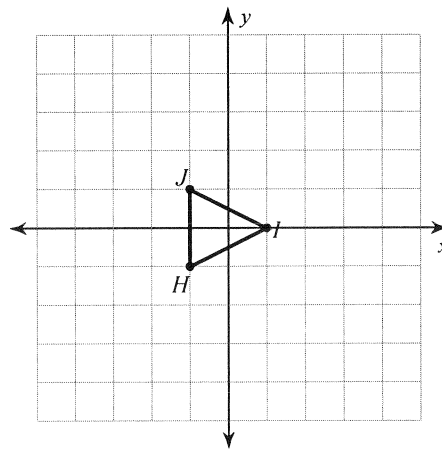


Graph the image of the figure using the transformation given.

3) dilation of $\frac{1}{2}$

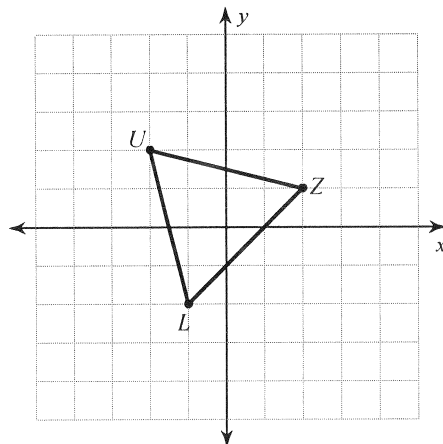


4) dilation of 4

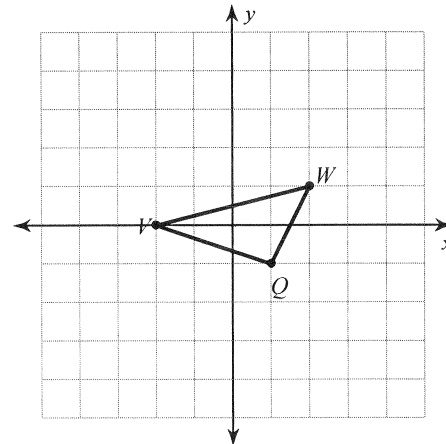


Find the coordinates of the vertices of each figure after the given transformation.

5) dilation of 1.5

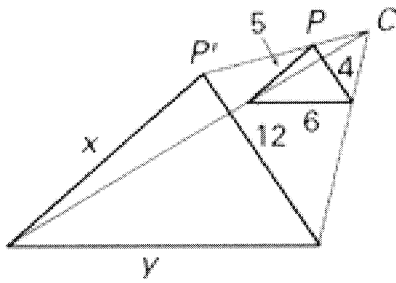


6) dilation of 2

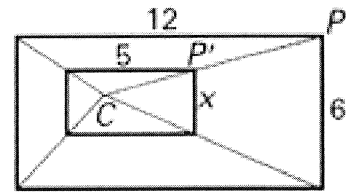


Find the scale factor. Tell whether the dilation is a *reduction* or an *enlargement*. Then find the values of the variables.

1.



2.



Determine if the following scale factor would create an enlargement, reduction, or isometric figure.

11. 3.5

12. $\frac{2}{5}$

13. 0.6

14. 1

15. $\frac{4}{3}$

16. $\frac{5}{8}$

Given the point and its image, determine the scale factor.

17. $A(3,6)$ $A'(4.5, 9)$

18. $G'(3,6)$ $G(1.5,3)$

19. $B(2,5)$ $B'(1,2.5)$

20. The sides of one right triangle are 6, 8, and 10. The sides of another right triangle are 10, 24, and 26. Determine if the triangles are similar. If so, what is the ratio of corresponding sides?