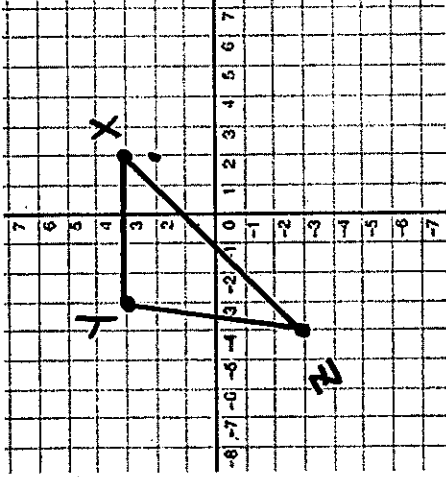


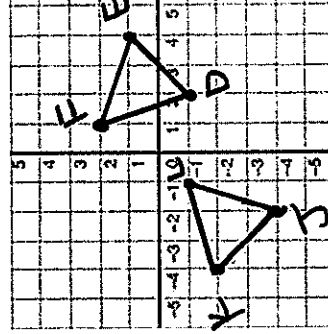
Chapter 4 Group Review

1. Graph $\triangle XYZ$ with vertices $X(2, 3)$, $Y(-3, 2)$, and $Z(-4, -3)$ and its image after the translation:

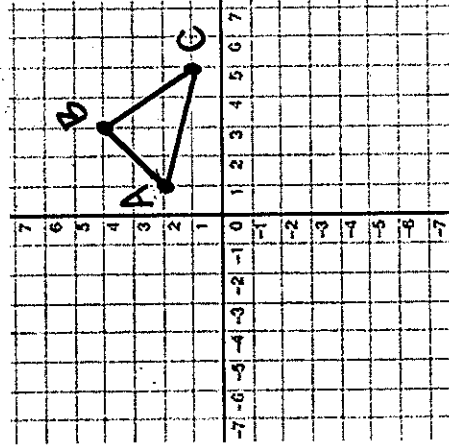
$(x, y) \rightarrow (x + 4, y - 1)$



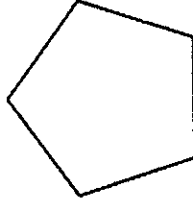
2. Describe a congruence transformation that maps $\triangle DEF$ onto $\triangle JKL$.



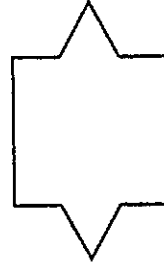
3. Graph the polygon's image after a reflection in the line $x = 4$.



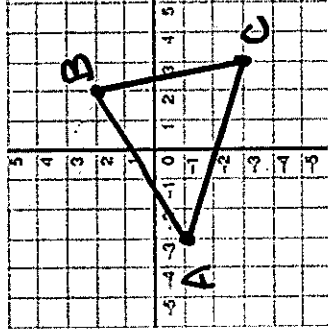
4. Determine whether the figure has rotational symmetry. Answer "yes" or "no." If "yes", determine ALL angles of rotational symmetry that will map the figure onto itself.



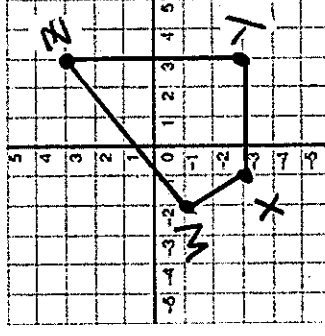
5. Determine whether the figure has line symmetry. Answer "yes" or "no." If "yes", draw ALL line of symmetry on the figure.



6. Graph $\triangle ABC$ and its image after a 90° rotation about the origin.



7. Graph quadrilateral WXYZ and its image after a 180° rotation about the origin.



8. A _____ $^\circ$ rotation clockwise is the same as a 90° rotation counterclockwise.

9. A _____ $^\circ$ rotation clockwise is the same as a 180° rotation counterclockwise.

10. A _____ $^\circ$ rotation clockwise is the same as a 270° rotation counterclockwise.

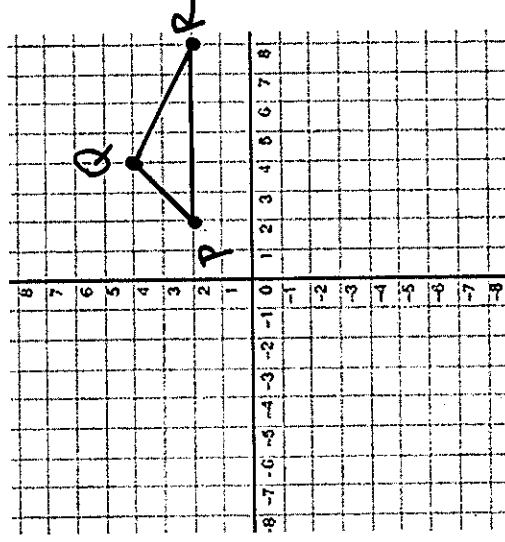
11. Performing two reflections in parallel lines results in the transformation (circle one):

Rotation
Dilation
Translation
Reflection

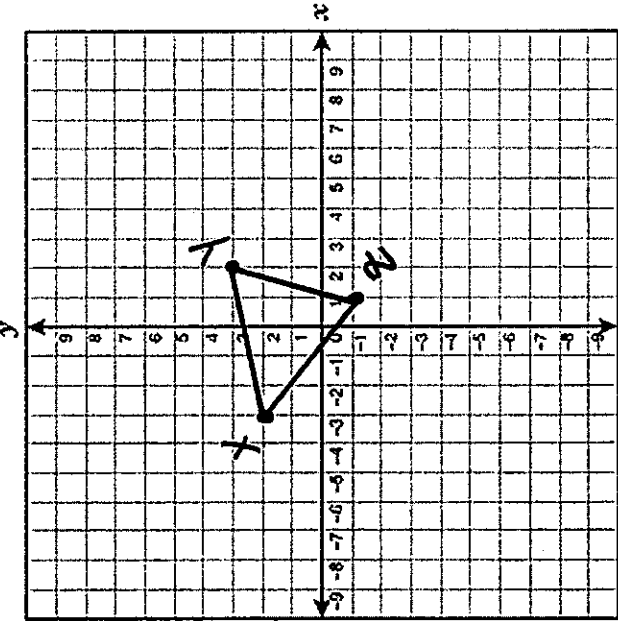
12. Performing two reflections in intersecting lines results in the transformation (circle one):

Rotation
Dilation
Translation
Reflection

13. Graph $\triangle PQR$ and its image after the dilation with scale factor of $\frac{1}{2}$



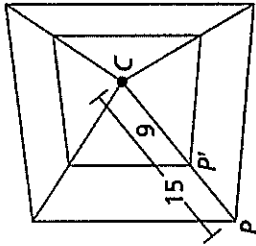
14. Graph $\triangle XYZ$ and its image after the dilation with scale factor -3.



$\frac{1}{4}$

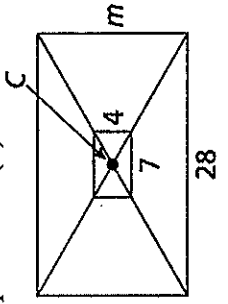
19. Find the scale factor of the dilation.

$\frac{1}{8}$



20. What is the scale factor (k) of the figure below if the dilation represents a(n)...

$\frac{1}{4}$

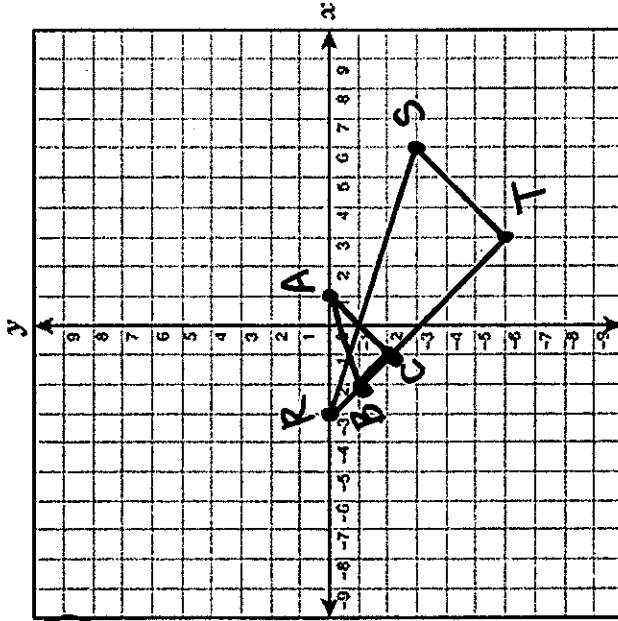


a. enlargement?

b. reduction?

15. Describe a similarity transformation that maps $\triangle ABC$ to $\triangle RST$.

$\frac{1}{4}$



21. Use the figure from #20 to find the value of m .

$\frac{1}{4}$

16. You are using a magnifying glass that shows the image of an object that is 8 times the object's actual size. The image length is 15.2 cm. Find the actual length of the object.

$\frac{1}{4}$

17. Name ALL transformations that are rigid motions:

$\frac{1}{8}$

18. Name ALL transformations that are nonrigid motions:

$\frac{1}{8}$