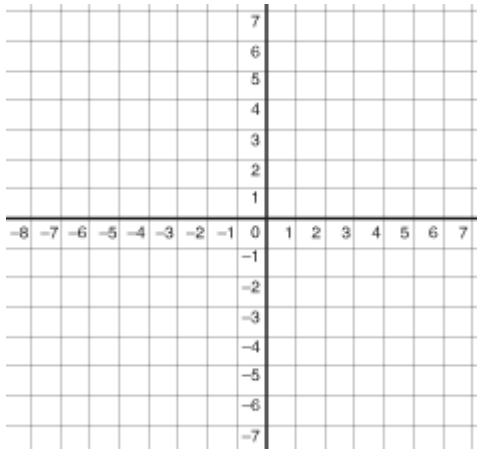
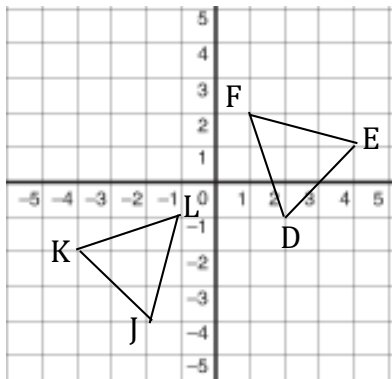


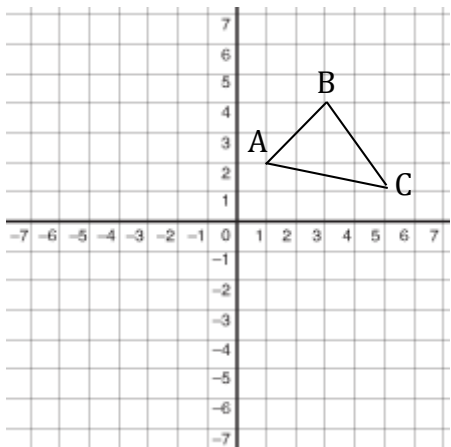
1. Graph  $\triangle XYZ$  with vertices  $X(2, 3)$ ,  $Y(-3, 2)$ , and  $Z(-4, -3)$  and its image after the translation:  
 $(x, y) \rightarrow (x + 4, y - 1)$



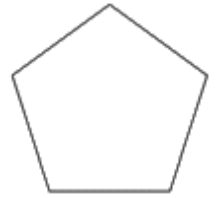
2. Describe a congruence transformation that maps  $\triangle DEF$  onto  $\triangle JKL$  (*Hint: two steps*).



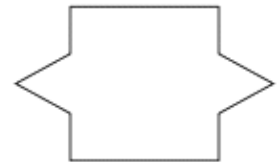
3. Graph the polygon's image after a reflection across the line  $x = 4$ .



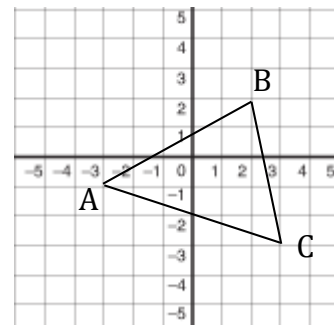
4. Determine whether the figure has rotational symmetry. Answer "yes" or "no." If "yes", determine ALL angles of rotational symmetry that will map the figure onto itself.



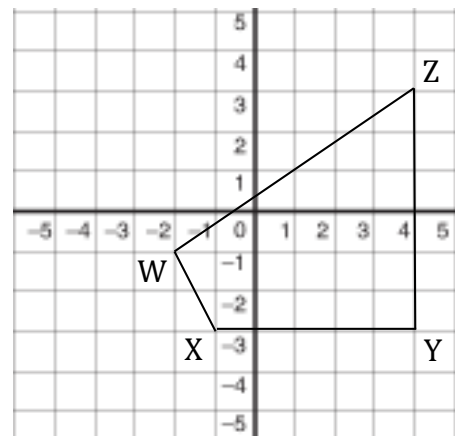
5. Determine whether the figure has line symmetry. Answer "yes" or "no." If "yes", draw ALL line of symmetry on the figure.



6. Graph the image of  $\triangle ABC$  after a  $90^\circ$  rotation around the origin.



7. Graph the image of quadrilateral WXYZ after a  $180^\circ$  rotation around the origin.



8. A \_\_\_\_\_° rotation clockwise is the same as a 90° rotation counterclockwise.

9. A \_\_\_\_\_° rotation clockwise is the same as a 180° rotation counterclockwise.

10. A \_\_\_\_\_° rotation clockwise is the same as a 270° rotation counterclockwise.

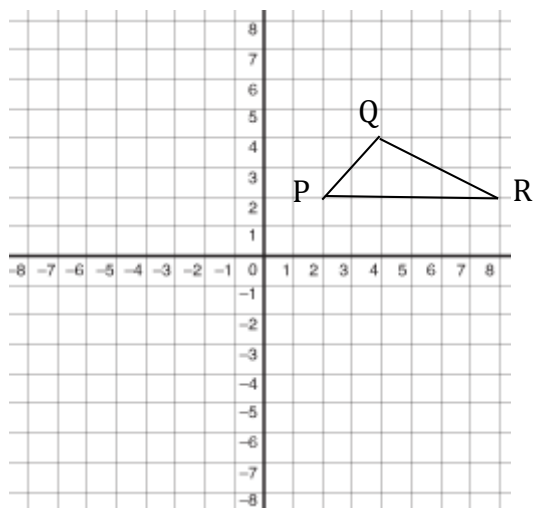
11. Performing two reflections in parallel lines results in the transformation (circle one):

Rotation	Translation
Dilation	Reflection

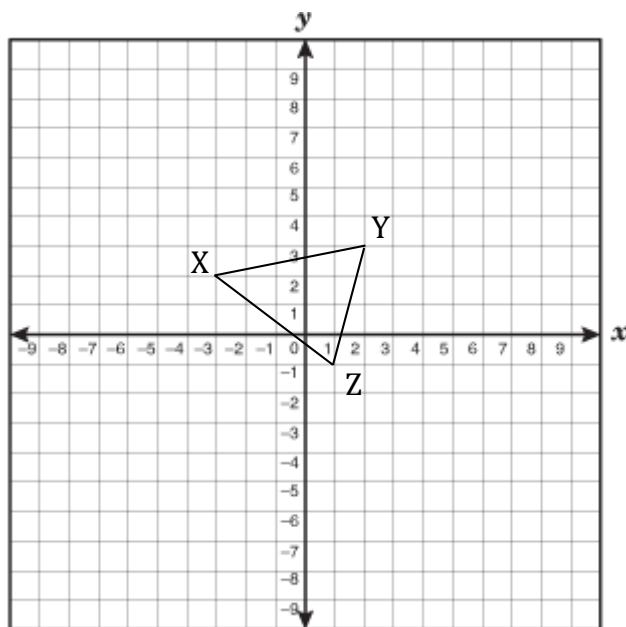
12. Performing two reflections in intersecting lines results in the transformation (circle one):

Rotation	Translation
Dilation	Reflection

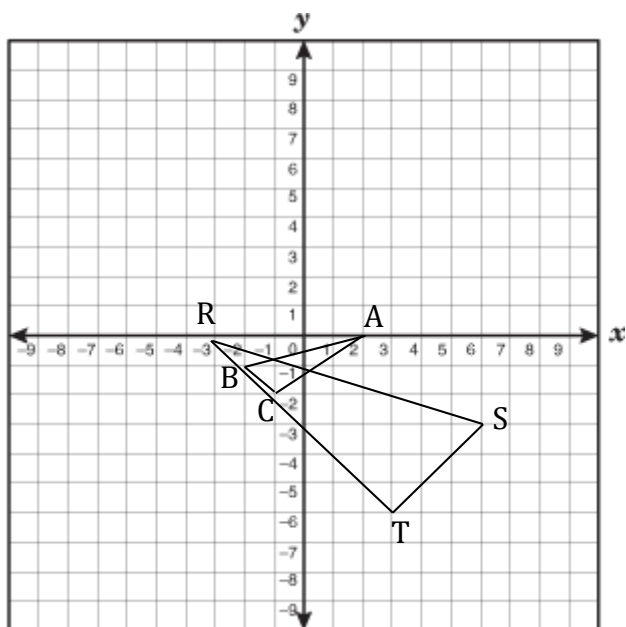
13. Graph the image of  $\Delta PQR$  after a dilation with a scale factor of  $\frac{1}{2}$



14. Graph the image of  $\Delta XYZ$  after a dilation with a scale factor of -3.



15. Describe a similarity transformation that maps  $\Delta ABC$  to  $\Delta RST$  (*Hint: two steps*).

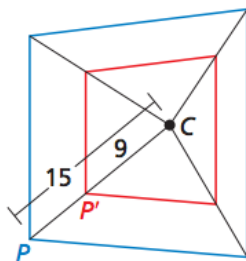


16. You are using a magnifying glass that shows the image of an object that is 8 times the object's actual size. The image length is 15.2 cm. Find the actual length of the object.

17. Name ALL transformations that are rigid motions:

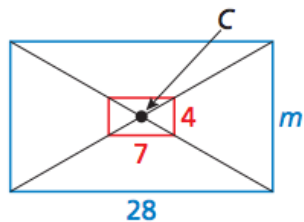
18. Name ALL transformations that are nonrigid motions:

19. Find the scale factor of the dilation  $P \rightarrow P'$ .



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

a. enlargement?



b. reduction?

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