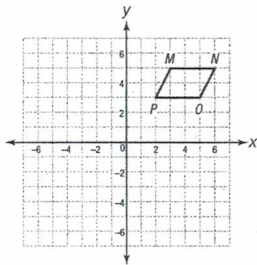


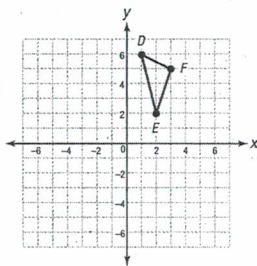
1 Review

Perform the transformation.

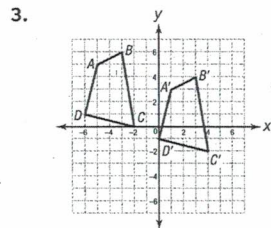
1. Transform parallelogram $MNOP$ by rotating it 180° around the point $(1, 1)$.



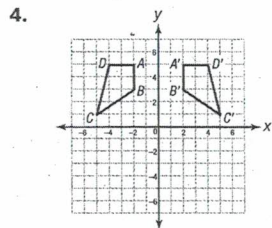
2. Transform $\triangle DEF$ by performing a reflection across the x -axis followed by a translation 2 units right.



Write a function to describe how $ABCD$ was transformed to create $A'B'C'D'$.



$T(x, y) =$ _____

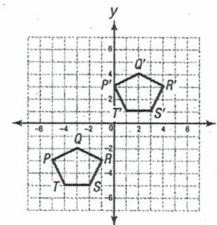


$R(x, y) =$ _____

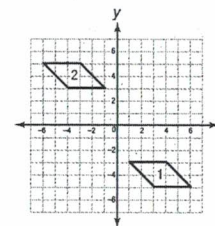
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Choose the best answer.

5. Pentagon $PQRST$ and its translated image are shown. Which statement is **not** true of these two figures?
6. Parallelogram 1 and its image, parallelogram 2, are shown. Which of the following transformations maps parallelogram 1 to parallelogram 2?



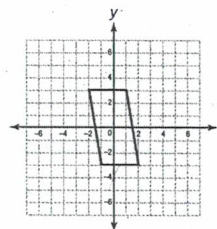
- A. $\overline{QR} \parallel \overline{Q'R'}$
 B. $RS = 2(R'S')$
 C. $\angle RST \cong \angle R'S'T'$
 D. $T(x, y) = (x + 5, y + 6)$



- A. $T(x, y) = (x + 8, y - 8)$
 B. $T(x, y) = (x - 2, y + 6)$
 C. $R(x, y) = (y, x)$
 D. $R_0(x, y) = (-x, -y)$

Describe a reflection or a rotation (of less than 360°) that can be used to map each figure onto itself.

7. parallelogram



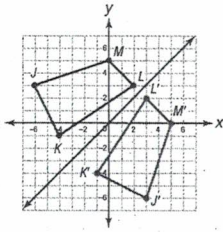
8. kite



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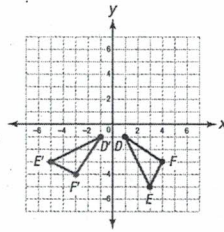
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9. Quadrilateral $JKLM$ and its reflected image are shown. Which statement is true of these two quadrilaterals?



- A. The image shows the result of a reflection across the x -axis.
 B. The path that point L takes across the line of reflection is perpendicular to the line of reflection.
 C. Each point (x, y) on quadrilateral $JKLM$ maps to a point $(-y, x)$ on its image.
 D. Corresponding sides of quadrilateral $JKLM$ and its image are parallel.

10. Triangle DEF is transformed to triangle $D'E'F'$. Which statement is **not** true of these two figures?



- A. This transformation shows the image of $\triangle DEF$ after a 270° counterclockwise rotation about the origin.
 B. This transformation preserved the side lengths and angle measures of the original figure.
 C. Sides \overline{DE} and $\overline{D'E'}$ lie on lines that are parallel to one another.
 D. Sides \overline{EF} and $\overline{E'F'}$ lie on lines that are perpendicular to one another.

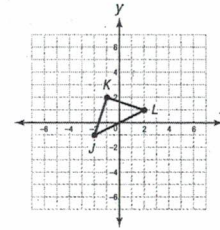
Fill in each blank with an appropriate word or phrase.

11. Two lines are _____ if they intersect to form right angles.
 12. A(n) _____ is a part of a line that falls between two points called endpoints.
 13. A(n) _____ is created by two distinct rays or line segments that meet at a common endpoint.
 14. A _____ is the set of all points equidistant from the same point, called the _____.

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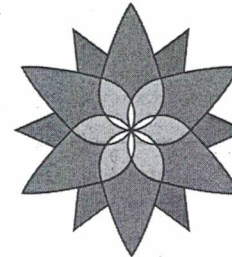
Use the given function to transform the given figure and graph the image. Use prime (') symbols to name the vertices. Then, describe each transformation in words.

15. $T(x, y) = (x - 4, y + 2)$

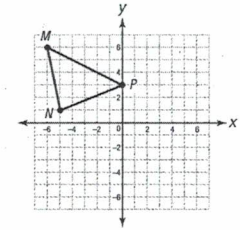


Solve.

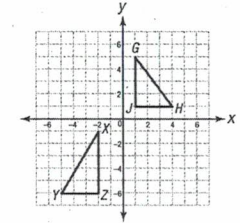
17. **LIST** List as many single transformations that map the figure onto itself as you can. Rotations should be clockwise and less than 360° . Lines of reflection can be drawn on the figure.



16. $R(x, y) = (x, -y)$



18. **ASSESS** Liam says that $\triangle GHJ$ can be mapped to $\triangle XYZ$ with a series of rigid motion transformations. Is he correct? If so, give a series of transformations that works. If not, explain why not.



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