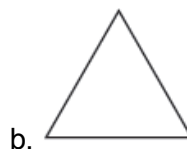
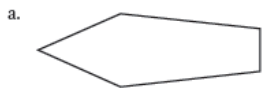


Unit 1 Review

Transformation on The Coordinate Plane

Name _____ Date _____

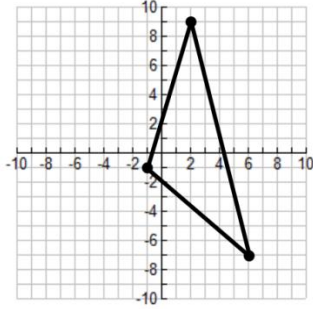
1. The mathematical statement $\overrightarrow{AB} \parallel \overrightarrow{CD}$ means:
2. The mathematical statement $\overline{PQ} \cong \overline{XY}$ means:
3. The mathematical statement $\overrightarrow{AB} \perp \overrightarrow{PQ}$ means:
4. What is an isometry?
5. a) How many lines of symmetry does each figure have? Draw the lines of symmetry.
b) Which ones have rotational symmetry? What are the angles of rotation?



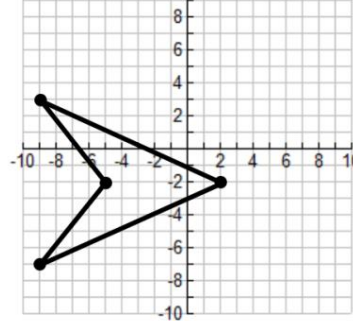
6. What type of transformation moves $P(3, -7)$ onto $P'(-3, -7)$?
7. What type of transformation moves $P(3, 7)$ onto $P'(-3, -7)$?
8. What type of transformation moves $P(3, 7)$ onto $P'(7, -3)$?
9. What type of transformation moves $P(3, -7)$ onto $P'(8, -4)$?
10. If $(x, y) \rightarrow (x - 7, y + 12)$,
 - a) What is the image of $(6, -9)$?
 - b) What is the preimage of $(7, -5)$?
11. What is the image of $(11, -8)$
 - a. under translation $(x + 5, y - 10)$ and then reflection over y-axis?
 - b. Under translation $(x - 5, y + 3)$ and then reflection over x-axis?
12. triangle ABC has vertices $A(1,2)$, $B(4,1)$, $C(3,4)$.
 - a. What are the coordinates of the vertices of $\Delta A'B'C'$ after reflection across line $y = x$?
 - b. What are the coordinates of the vertices of $\Delta A'B'C'$ after reflection across line $y = -x$?
 - c. What are the coordinates of the vertices of $\Delta A'B'C'$ after Rotation 90° clockwise around the origin?
 - d. What are the coordinates of the vertices of $\Delta A'B'C'$ after Rotation 180° clockwise around the origin?

Draw the image of each figure, using the given transformation.

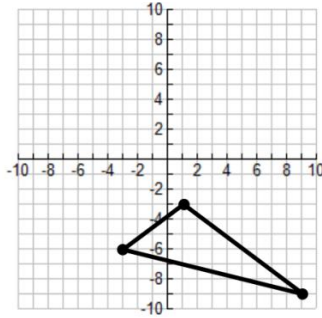
13. Translation $(x, y) \rightarrow (x - 8, y - 3)$



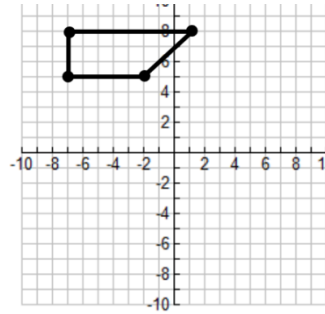
14. Reflection across the line $x = 2$



15. Rotation 180° about the origin

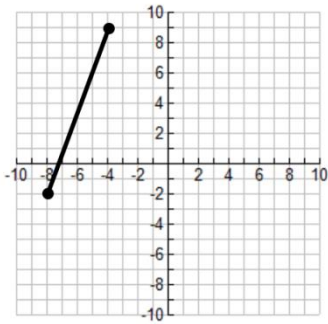


16. Rotation 90° clockwise about the origin.



17. Translation $(x, y) \rightarrow (x + 9, y - 8)$

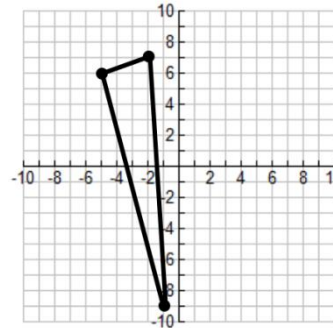
Rotation 90° CCW about the origin



18. Translation $(x, y) \rightarrow (x + 4, y - 2)$

Rotation 180° about the origin.

Reflection about the line $y = x$.



Specify if the following equations or graphs are **even**, **odd**, or **neither**.

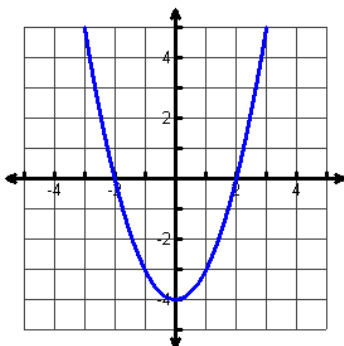
19. $y = 3x^2 + 5$

20. $y = 6x^2 - 7x^8$

21. $y = 10$

22. $y = 4x$

23.



24.

