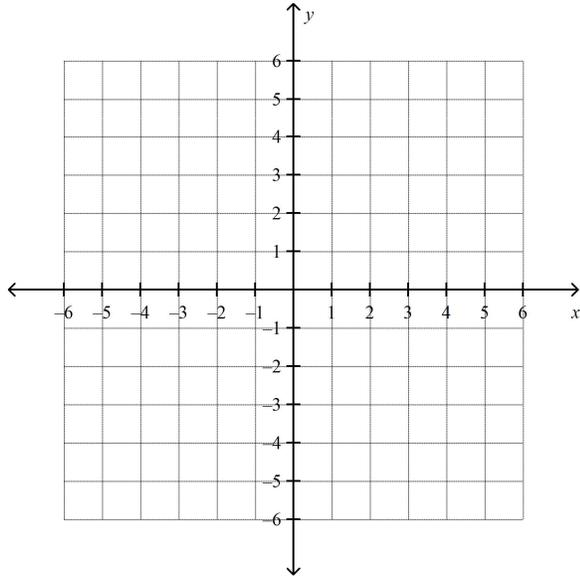


Geometry Unit 8--STUDY GUIDE

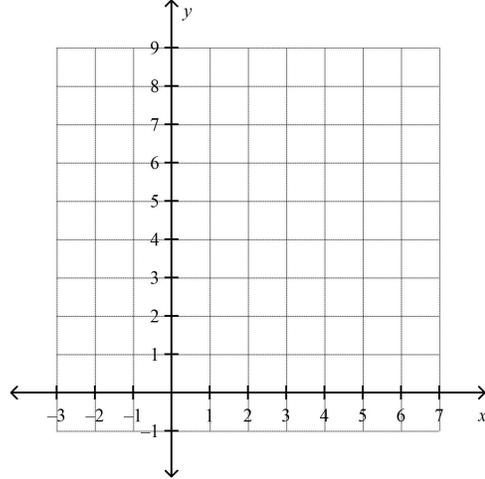
1. The point $I(-4, -1)$ is rotated 90° about the origin. What is the image of I ?
 - a. $I'(1, -4)$
 - b. $I'(4, -1)$
 - c. $I'(-1, -4)$
 - d. $I'(4, -1)$

Graph each figure and its image under the given translation.

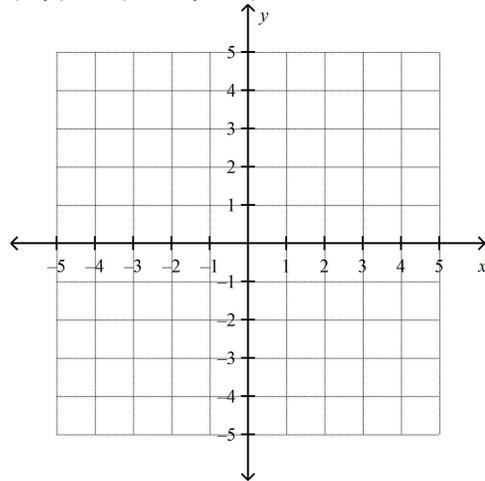
2. \overline{AB} with endpoints $A(-3, 2)$ and $B(-4, 3)$ under the translation left two units and down one unit



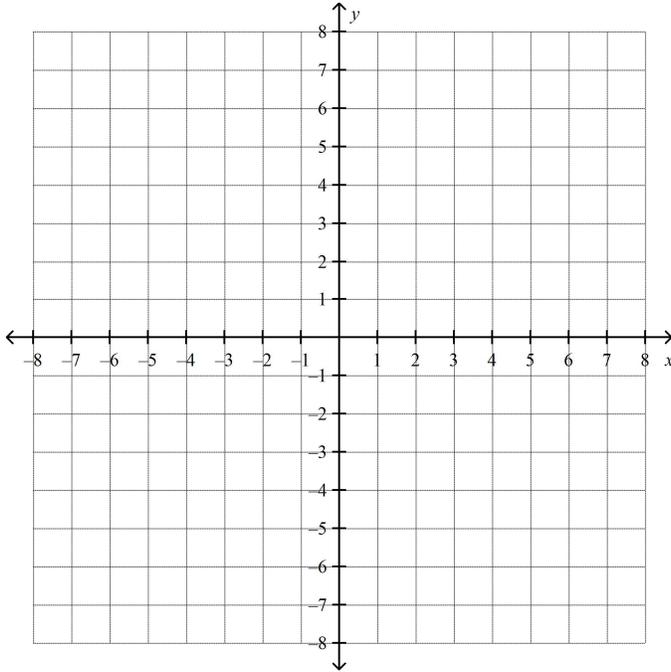
3. \overline{CD} with endpoints $C(3, 5)$ and $D(-1, 4)$ under the translation right three units and up two units



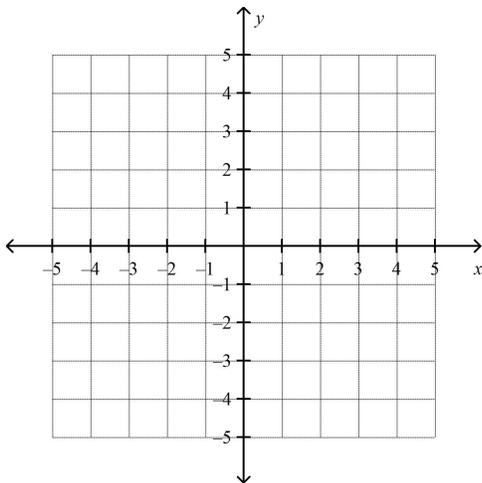
4. $\triangle ABC$ with vertices $A(-3, 5)$, $B(-1, 4)$, and $C(-2, 2)$ under the translation $(x, y) \rightarrow (x + 3, y - 3)$.



5. $\triangle EFG$ with vertices $E(-2, -3)$, $F(-3, -2)$, $G(-1, -1)$ under the translation left three units and down two units

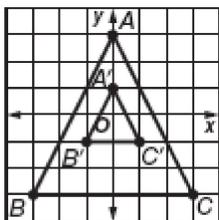


6. \overline{YZ} with endpoints $Y(-1, 2)$, and $Z(3, 3)$ under the translation $(x, y) \rightarrow (x + 1, y - 2)$.



7. Find the image of $A(3, 7)$ under a translation along the vector $\langle -4, 2 \rangle$.
- $A'(-7, -5)$
 - $A'(-1, 9)$
 - $A'(1, -9)$
 - $A'(7, 5)$
8. What is the image of $X(3, 5)$ along the translation vector $\langle -4, 6 \rangle$?
- $X'(7, -1)$
 - $X'(-1, -1)$
 - $X'(-1, 11)$
 - $X'(7, 11)$

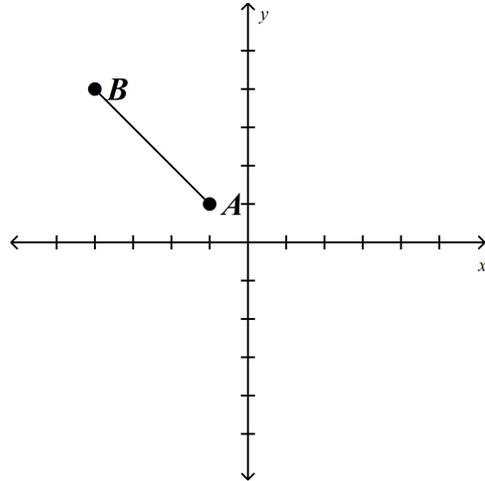
9. Which transformation moves all points the same distance in the same direction?
- translation
 - reflection
 - rotation
 - dilation
10. $\triangle ABC$ has vertices $A(-2, 1)$, $B(-4, -1)$, and $C(0, -1)$ and is reflected in the line $x = 2$. What is the coordinate of C' ?
- $C'(2, 0)$
 - $C'(4, -1)$
 - $C'(2, -1)$
 - $C'(-4, -1)$
11. Name the object that exhibits rotational symmetry.
- ferris wheel
 - sunglasses
 - a pair of scissors
 - tent
12. If $\triangle A'B'C'$ is the image of $\triangle ABC$ under a dilation with center at $(0, 0)$, what is the scale factor?



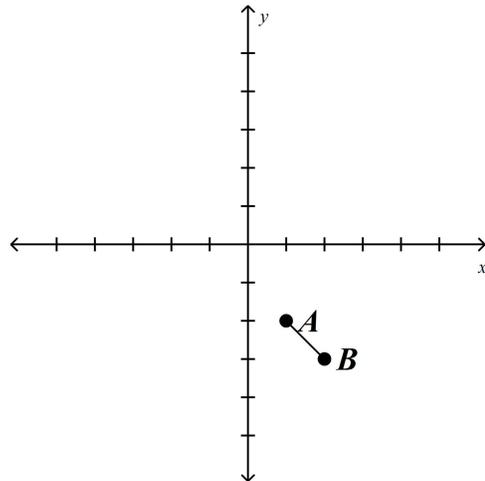
- 3
- $\frac{2}{3}$
- $-\frac{1}{3}$
- $\frac{1}{3}$

Find the endpoints of the image of \overline{AB} .

13. Reflect \overline{AB} over the x -axis and rotate 90° about the origin.



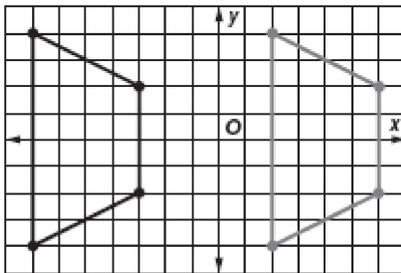
- $A''(1, -1)$, $B''(4, -4)$
 - $A''(-1, -1)$, $B''(-4, -4)$
 - $A''(-1, 1)$, $B''(-4, 4)$
 - $A''(-4, 4)$, $B''(-1, 1)$
14. Reflect \overline{AB} over the y -axis and rotate 180° about the origin.



15. Point $K(-2, 1)$ is rotated 90° about the origin. What are the coordinates of K' ?
- $K'(-1, 2)$
 - $K'(2, -1)$
 - $K'(-1, -2)$
 - $K'(-2, 1)$

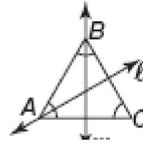
16. Which transformation turns every point of the preimage through a specified angle and direction about a fixed point?
- dilation
 - rotation
 - reflection
 - translation

17. Which vector best describes the translation at the right?



- $\langle 8, 4 \rangle$
 - $\langle 4, 8 \rangle$
 - $\langle 9, 0 \rangle$
 - $\langle 0, 9 \rangle$
18. Given $A(3, -7)$, under which reflection is $A'(3, 7)$?
- reflection in the y -axis
 - reflection in the line $y = 5$
 - reflection in the x -axis
 - reflection in the origin

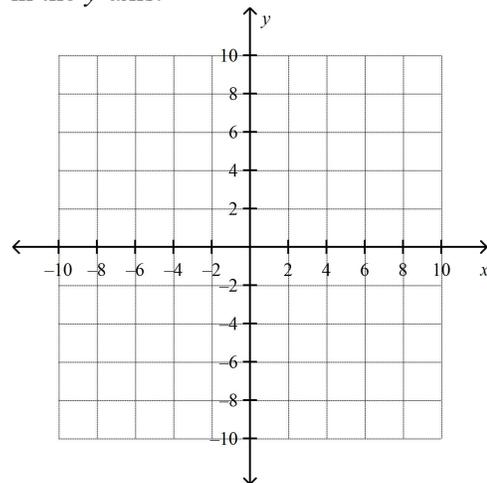
19. Name the image of \overline{BC} under reflection in line m .



- \overline{BA}
 - \overline{AC}
 - line ℓ
 - \overline{BC}
20. Find the image of $P(-2, 4)$ under a translation along the vector $\langle 6, 5 \rangle$.
- $P'(8, 1)$
 - $P'(-8, -1)$
 - $P'(4, 9)$
 - $P'(-4, -9)$

21. Graph the figure and its image under the given reflection.

\overline{AB} with endpoints $A(-7, 8)$ and $B(-5, 5)$ reflected in the y -axis.

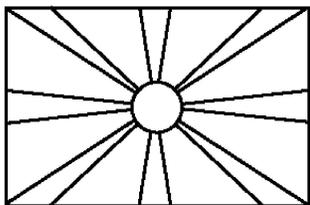


22. Find the coordinates of X' with $X(6, 5)$ for a dilation centered at the origin with a scale factor of 2.

- a. $X'(-10, -12)$
- b. $X'(10, 12)$
- c. $X'(-12, -10)$
- d. $X'(12, 10)$

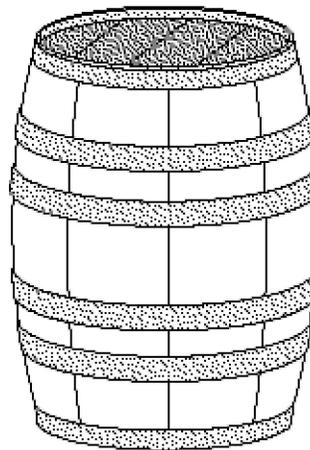
Determine how many lines of symmetry each object has. Then determine whether each object has point symmetry.

23.



- a. 2; no
- b. 2; yes
- c. 3; yes
- d. 3; no

24.



- a. 2; no
- b. 2; yes
- c. infinite; yes
- d. infinite; no

25. What is the image of $Y(-4, 7)$ under the translation $\langle 3, 5 \rangle$?

- a. $Y'(-7, 2)$
- b. $Y'(-7, 12)$
- c. $Y'(-1, 12)$
- d. $Y'(-1, 2)$