

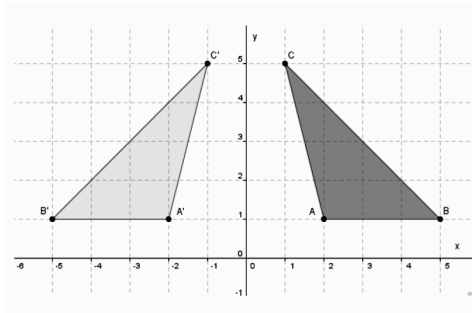
Name \_\_\_\_\_ Per \_\_\_\_\_

LO: I can perform tasks involving the learning objectives of unit 10: Transformations.

DO NOW On the back of this packet

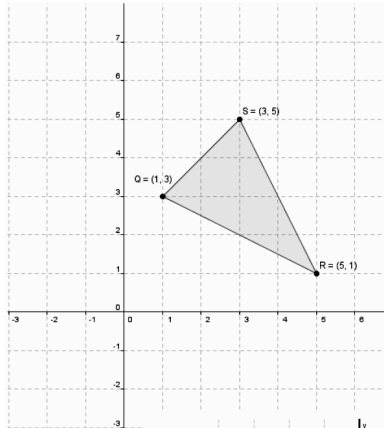
(1) Rigid motions preserve \_\_\_\_\_ and \_\_\_\_\_ which means they map \_\_\_\_\_ to \_\_\_\_\_ and \_\_\_\_\_ to \_\_\_\_\_

- Which of these describes the transformation of the triangle?
  - Reflection over the x-axis
  - Reflection over the y-axis
  - Rotation of  $90^\circ$  clockwise about the origin
  - Rotation of  $180^\circ$  clockwise about the origin



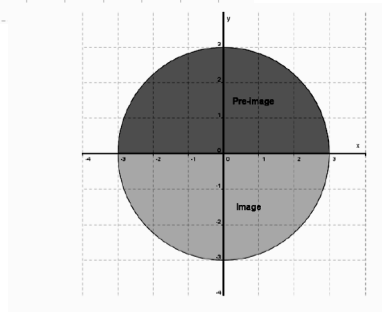
- Triangle QRS is rotated  $90^\circ$  around point Q. Which of the following does not have to be true?

- $\overline{Q'S'} \perp \overline{QS}$
- $\overline{QR} \perp \overline{QS}$
- $\overline{Q'S'} \cong \overline{QS}$
- $\overline{QR} \cong \overline{R'Q'}$



- Which of these transformations could produce the image shown?

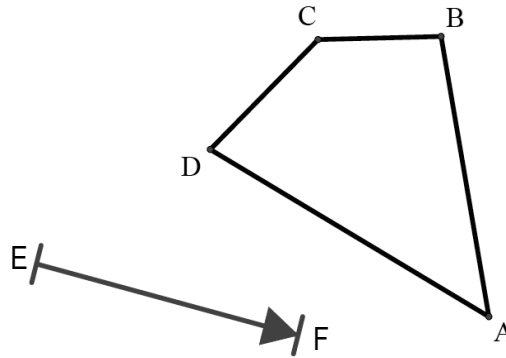
- dilation
- glide reflection
- rotation
- translation



- A figure is located entirely in the third quadrant. If it is reflected over the y-axis, in which quadrant will its image lie?
  - first
  - second
  - third
  - fourth

(2) **Constructing transformations**

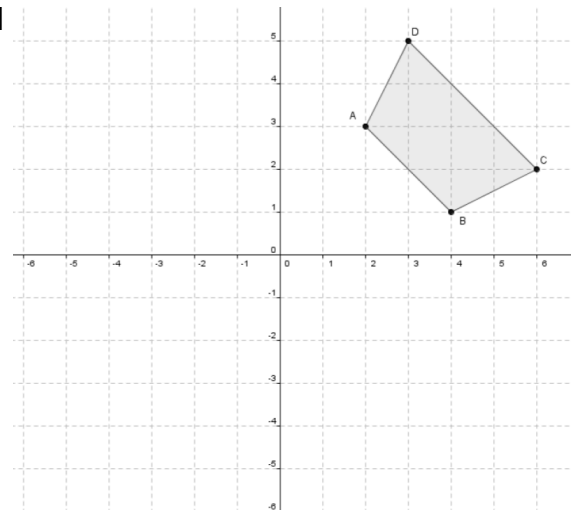
5. Construct  $T_{\vec{EF}}(ABCD)$



6. Which transformation can map the letter A to itself? \_\_\_\_\_

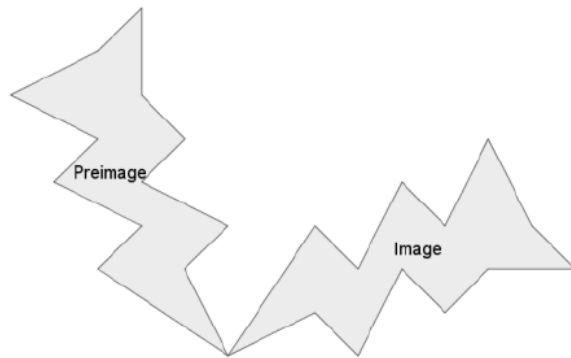
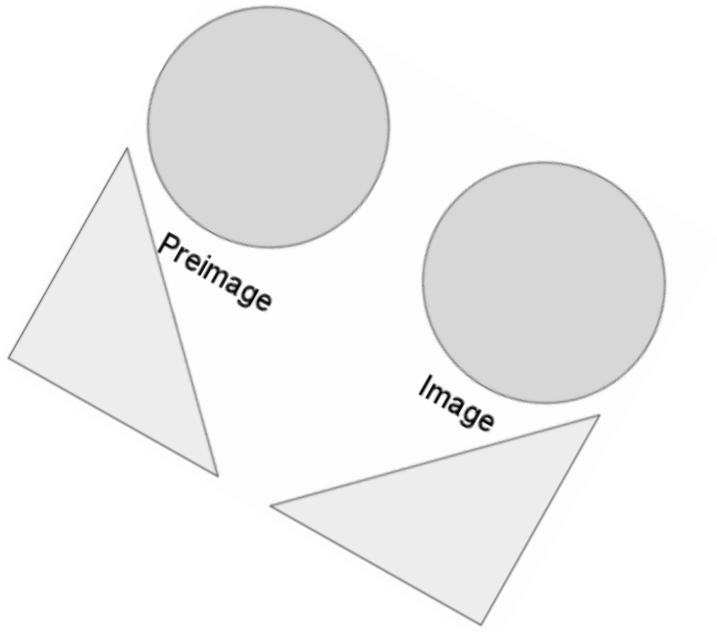
7. Trapezoid ABCD is graphed with  $\overline{AB} \parallel \overline{CD}$ . If ABCD is reflected across the y-axis, which of the following must be true?

- $\overline{A'B'} \parallel \overline{AB}$
- $\overline{A'B'} \parallel \overline{CD}$
- $\overline{A'B'} \parallel \overline{C'D'}$
- $\overline{AB} \parallel \overline{C'D'}$



(3) **Lines of reflection and centers of rotation**

8. Construct the line of reflection or center of rotation for each preimage/image pair. Label line(s) of reflection  $v$  and centers of rotation  $t$ . Label vertices of the image figures. Which point maps to itself? Explain why the point maps to itself.



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 (3) **Lines of reflection and centers of rotation**

9. Precisely describe each of the three rigid motion transformations identified.

$$T_{\overline{BL}}(\triangle AST)$$

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$$R_{M, -42^\circ}(\overline{OP})$$

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$$r_{\overline{HA}}(T)$$

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