Lesson 4 Assignment

Rotations

Work slowly and carefully. If you are having difficulty, go back and review the appropriate *Lesson*.

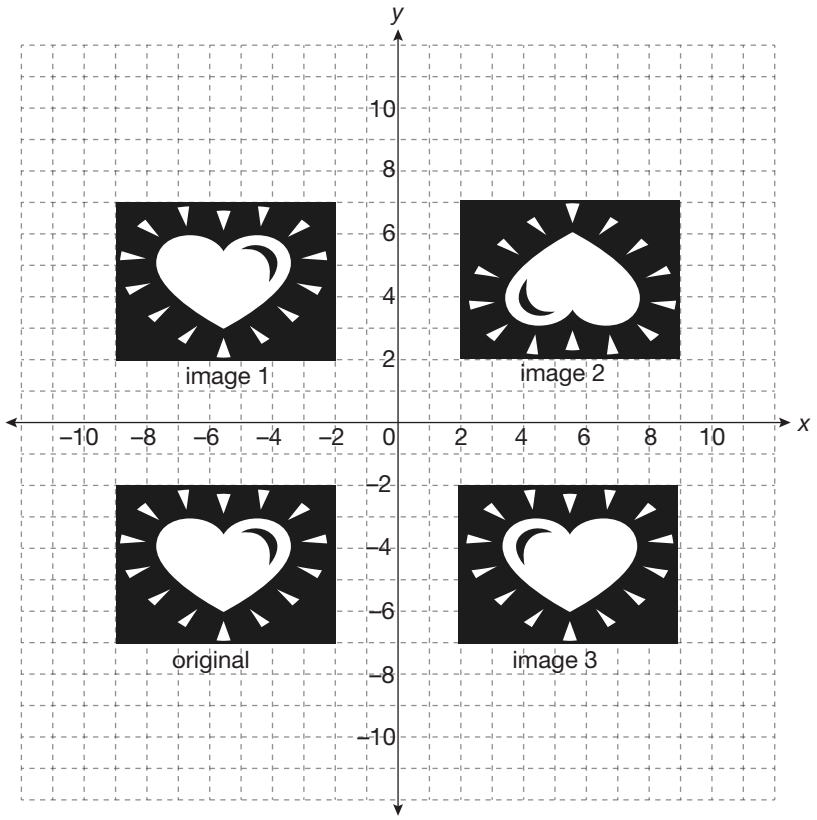
For full marks, show all calculations, steps, and/or explain your answers.

Total: 22 marks.

(2) 1. Match the rotations in the left column with the descriptions in the right column.

a. 90°	i. full turn
b. 180°	ii. quarter-turn
c. 270°	iii. three-quarter turn
d. 360°	iv. half turn

2. Look at the diagram below. The original image is labelled.



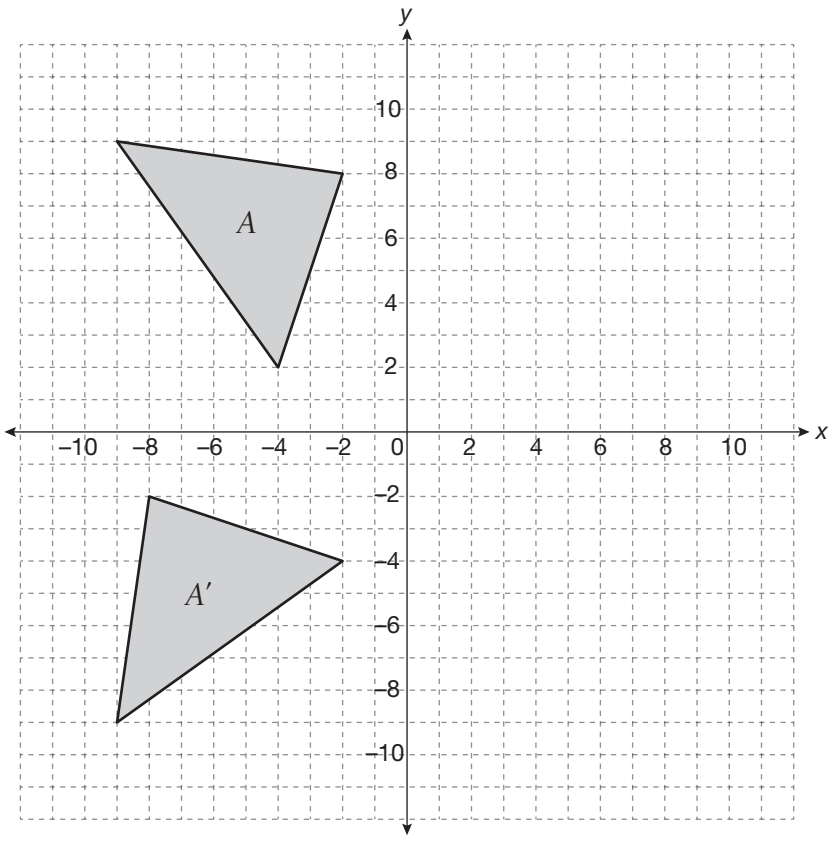
Identify each image as a dilation, reflection, rotation, or translation.

(1) a. Image 1

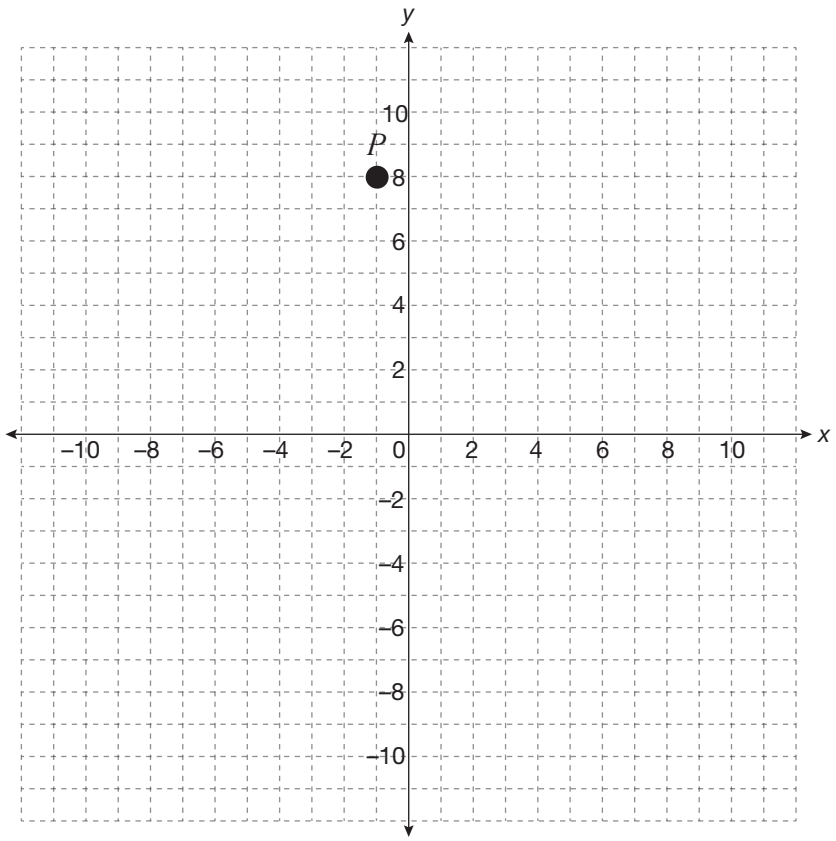
(1) b. Image 2

(1) c. Image 3

(1) 3. State the degree and direction of the rotation in the diagram.



4. Answer the following questions using point P.

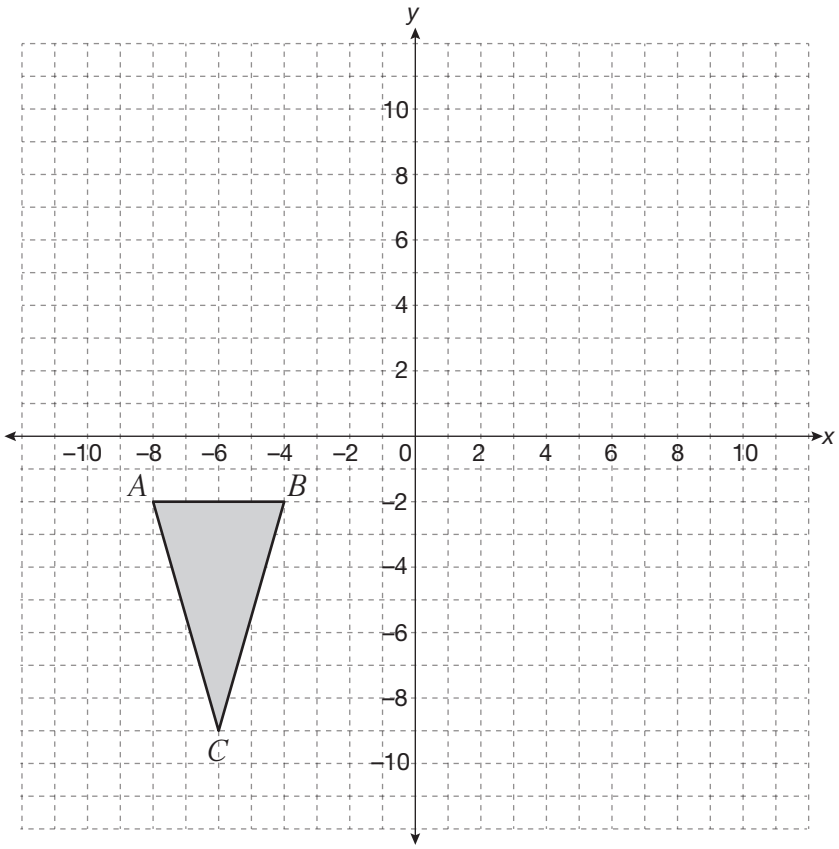


(1) a. Rotate point P 90° counterclockwise about the origin. State the coordinates of P'.

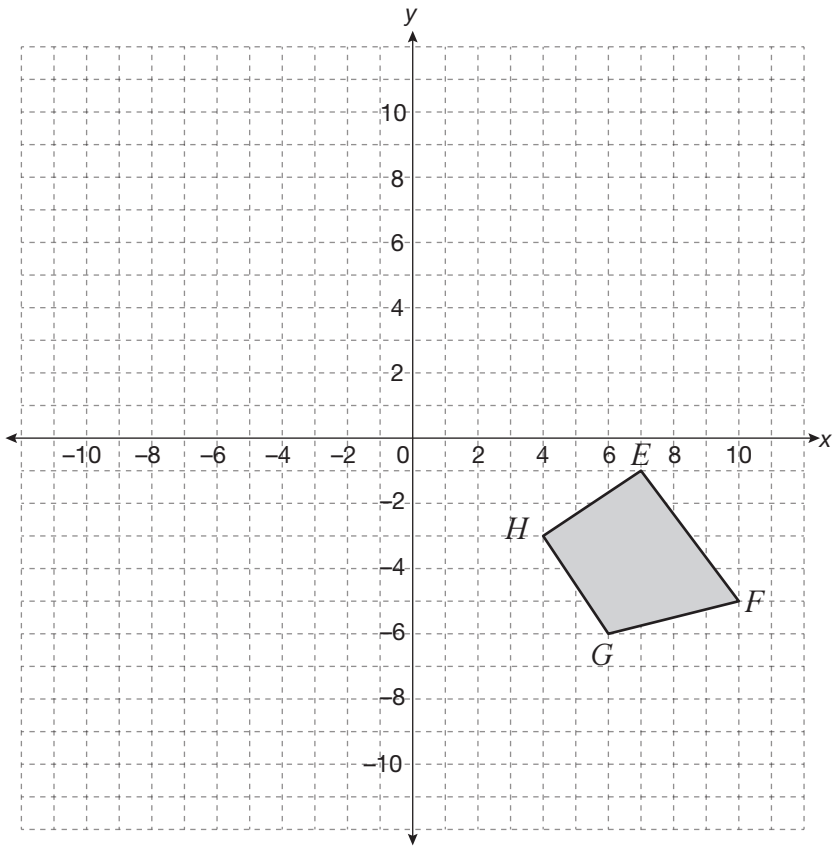
(1) b. Rotate point P 180° about the origin. State the coordinates of P'.

(1) c. Rotate point P 270° counterclockwise about the origin. State the coordinates of P'.

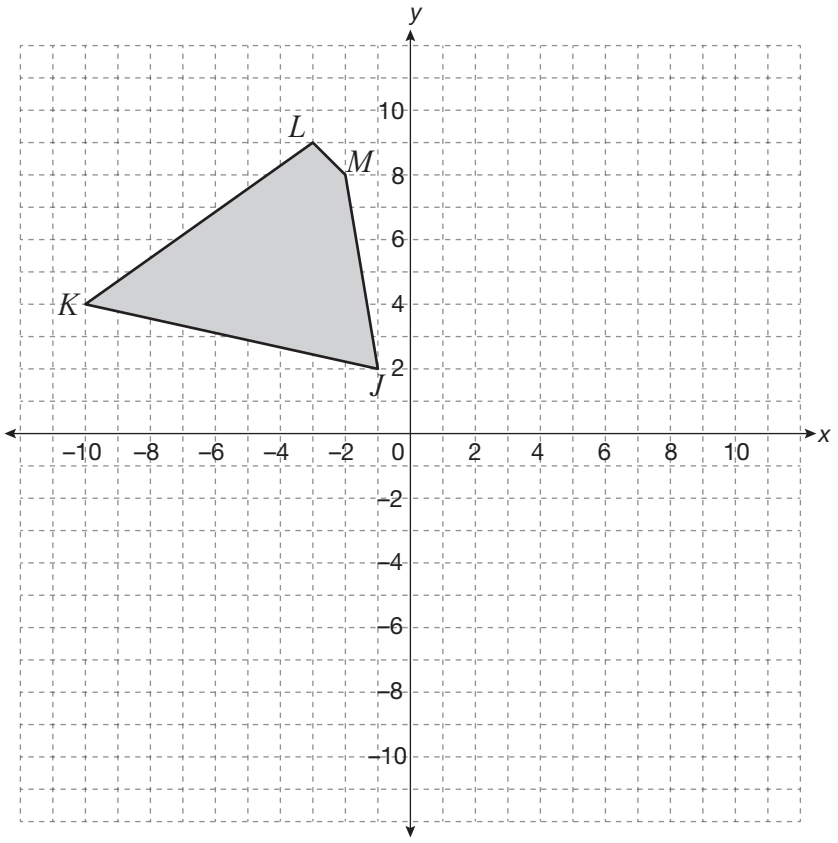
(2) 5. Rotate triangle ABC $270°$ clockwise about the origin. Draw and label image $A'B'C'$.



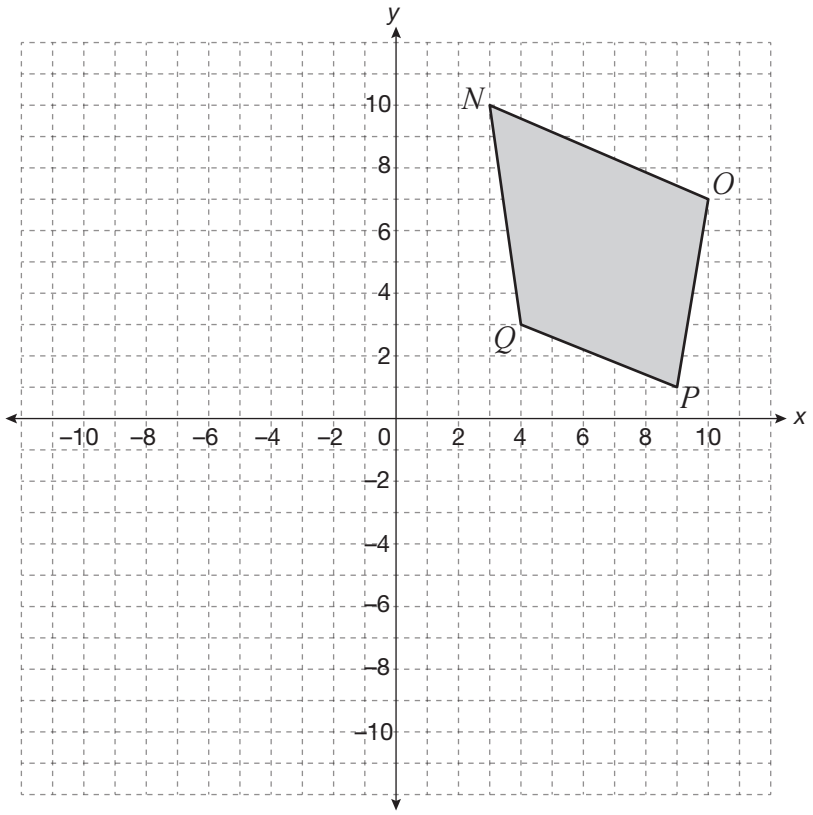
(2) 6. Rotate quadrilateral $EFGH$ $90°$ counterclockwise about the origin. Draw and label image $E'F'G'H'$.



(2) 7. Rotate quadrilateral $JKLM$ $180°$ about the origin. Draw and label image $J'K'L'M'$.

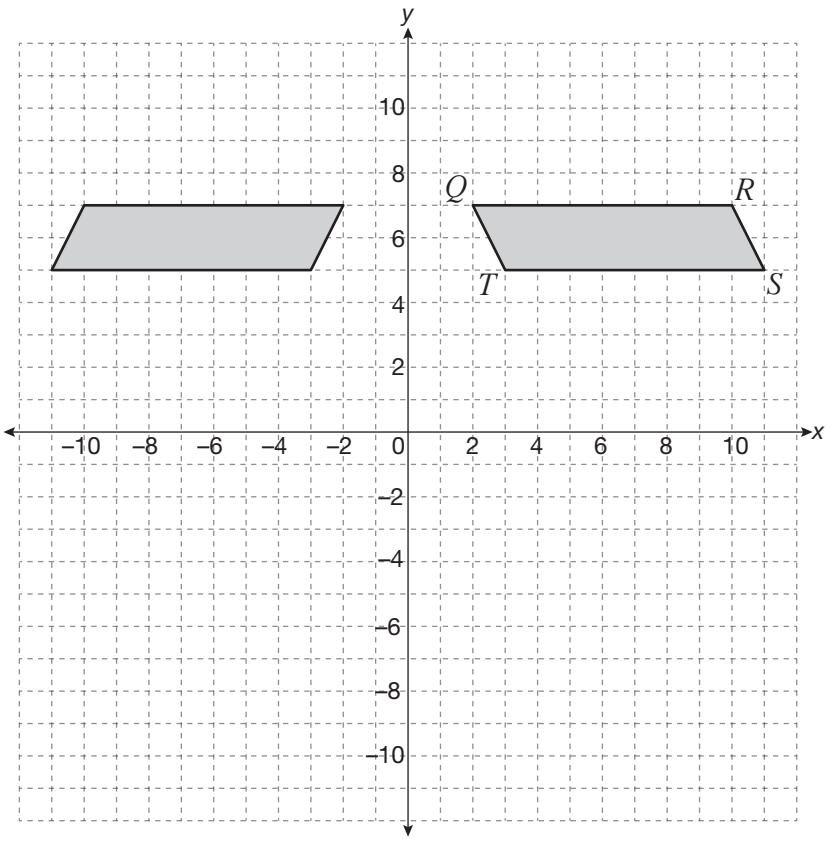


(1) 8. Quadrilateral $NOPQ$ is rotated $360°$ counterclockwise about the origin. State the coordinates of each vertex of image $N'O'P'Q'$.

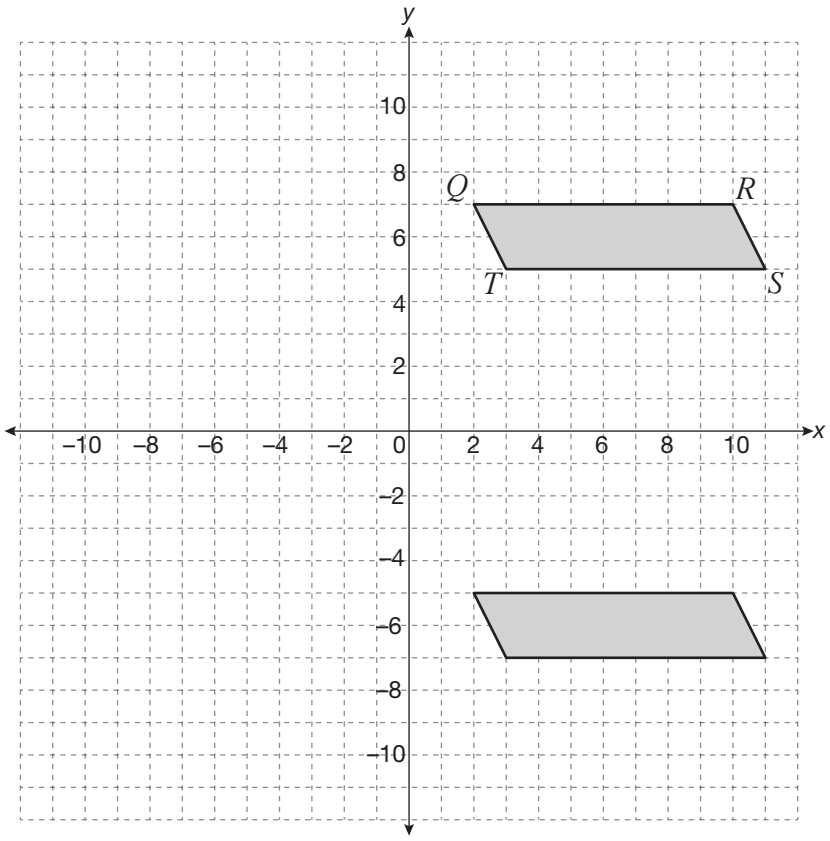


9. Only one transformation has been applied to $QRST$. Identify if the transformation is a dilation, translation, reflection, or rotation. Explain your reasoning.

(2) a.



(2) b.



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c.