

Unit 1: Rigid Transformations and Congruence

PRACTICE • SET 2

Name: _____ Date: _____

Solve each problem and write your exact answer (a number, coordinate pair, or short value) on the line provided. Show no work needed—just the final answer.

1. The point A(3, 5) is translated 4 units to the right and 2 units down. What are the coordinates of the image A'?

Answer: _____

3. The point C(4, -7) is reflected across the x-axis. What are the coordinates of the image C'?

Answer: _____

5. The point E(-2, 3) is rotated 90° counterclockwise about the origin. (The rule is $(x, y) \rightarrow (-y, x)$.) What are the coordinates of the image E'?

Answer: _____

7. A translation maps point P(2, 4) to P'(9, 4). By how many units and in which direction along the x-axis is the figure translated? Give the number of units the figure moves to the right.

Answer: _____

9. The point K(-4, -9) is reflected across the line $y = x$. (The rule is $(x, y) \rightarrow (y, x)$.) What are the coordinates of the image K'?

Answer: _____

2. The point B(-6, 2) is reflected across the y-axis. What are the coordinates of the image B'?

Answer: _____

4. The point D(5, 8) is rotated 180° about the origin. What are the coordinates of the image D'?

Answer: _____

6. The point F(6, -1) is rotated 90° clockwise about the origin. (The rule is $(x, y) \rightarrow (y, -x)$.) What are the coordinates of the image F'?

Answer: _____

8. A segment has endpoints G(1, 2) and H(5, 2). After a rigid transformation, the image of the segment has endpoints G'(1, 6) and H'(5, 6). What is the length of segment G'H'?

Answer: _____

10. The point L(7, -3) is translated by the rule $(x, y) \rightarrow (x - 10, y + 5)$. What are the coordinates of the image L'?

Answer: _____

11. Triangle ABC is congruent to triangle DEF because one is a rigid transformation of the other. Side AB has length 12 and corresponds to side DE. What is the length of side DE?

Answer: _____

12. The point M(0, 6) is rotated 180° about the origin and then reflected across the y-axis. What are the coordinates of the final image M''?

Answer: _____