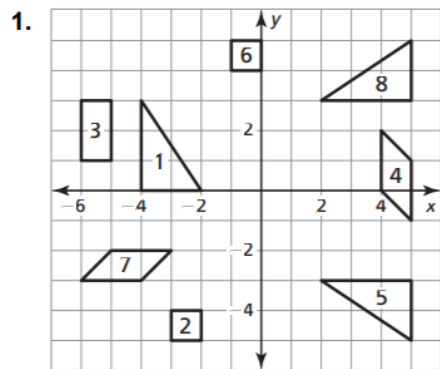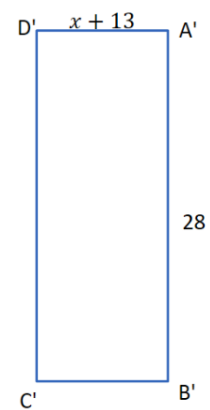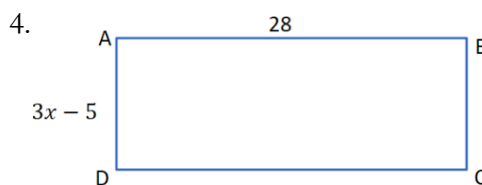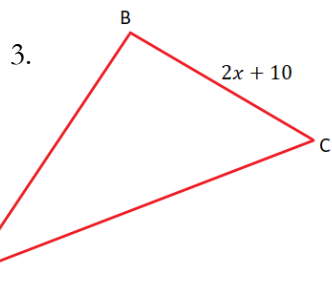# Geometry
Worksheet 4B

Identify any congruent figures in the coordinate plane. If they are congruent, explain their transformation using the words translation, reflection, and rotation.

1.

2.
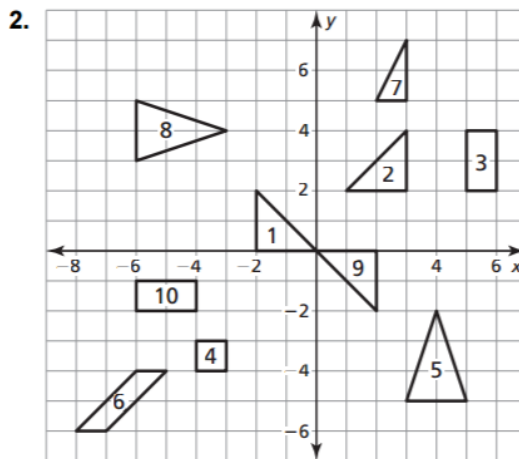
Given that the transformations are rigid, solve for x.

3.

$2x + 10$

24

15

4.

28

$3x - 5$

$x + 13$

28

Find the coordinates of each image after the specified transformation.

5. A(2, -3), B(5, 1)

    Reflection: over the x-axis
    Rotation: 90 clockwise

6. C(5, -4), D(-2, -1)

    Translation: $(x, y) \rightarrow (x - 2, y + 3)$
    Reflection: over the y-axis

7. E(5, 2), F(-1, -4)

    Rotation: 180 counterclockwise
    Translation: $\langle -3, 0 \rangle$

8. G(-3, -1), H(4, -2)

    Reflection: over the line $y = x$
    Translation: $\langle 2, -4 \rangle$

Determine what type of transformation was performed.

9. A(2, -3), A'(-2, -3)

10. B(3, 2), B'(5, 5)

11. C(-4, -3), C'(-3, 4)

12. D(1, 4), D'(1, -4)

13. E(-7, 3), E'(-1, 2)

14. F(4, 1), F'(-4, -1)