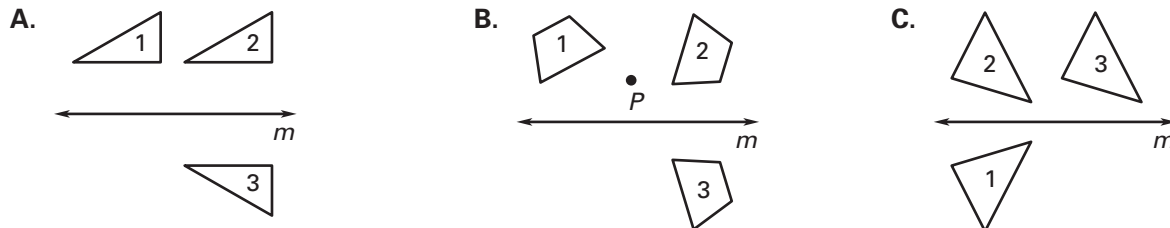NAME _____ DATE _____

Practice B
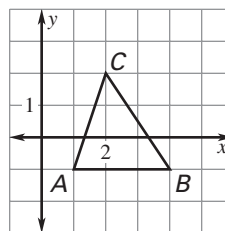
For use with pages 430–436

Match the composition with the diagram, in which figure 1 is the preimage of figure 2, and figure 2 is the preimage of figure 3.

A.

B.

C.

1. Reflect in line *m*, then translate parallel to line *m*.

2. Translate parallel to line *m*, then reflect in line *m*.

3. Rotate about point *P*, then reflect in line *m*.

Perform the stated transformation on the preimage, △ABC. Give the coordinates of the image, △A′B′C′.

4. Rotation: 90° clockwise about the origin

5. Reflection: in $x = 3$

6. Translation: $(x, y) \rightarrow (x + 3, y - 2)$

7. Rotation: 180° counterclockwise about the origin

8. Translation: $(x, y) \rightarrow (x - 3, y - 2)$

9. Reflection: in the line $y = x$

Sketch the image of $A(-4, 2)$ after the described glide reflection.

10. **Translation:** $(x, y) \rightarrow (x, y + 3)$
    Reflection: in the *y*-axis

11. **Translation:** $(x, y) \rightarrow (x - 2, y + 5)$
    Reflection: in $y = 4$

12. **Translation:** $(x, y) \rightarrow (x - 2, y - 5)$
    Reflection: in $x = -1$

13. **Translation:** $(x, y) \rightarrow (x + 3, y + 2)$
    Reflection: in $y = x$

Describe the composition of the transformations.

14.

15.