Name_____ Date_____
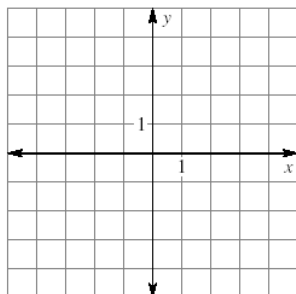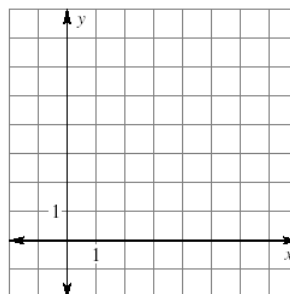
Practice B
For use with pages 607–615

The endpoints of $\overline{CD}$ are $C(1, 2)$ and $D(5, 4)$. Graph the image of $\overline{CD}$ after the glide reflection.

1. **Translation:** $(x, y) \rightarrow (x - 4, y)$
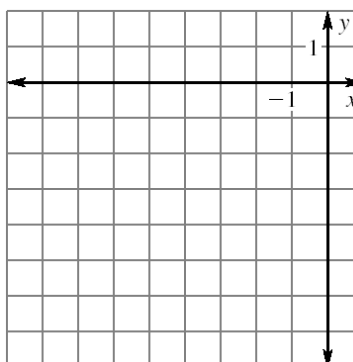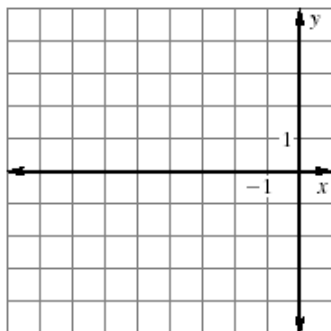   **Reflection:** in the x-axis

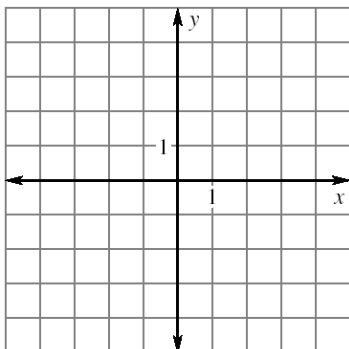2. **Translation:** $(x, y) \rightarrow (x, y + 2)$
   Reflection: in $y = x$

The vertices of $\triangle ABC$ are $A(3, 1)$, $B(1, 5)$, and $C(5, 3)$. Graph the image of $\triangle ABC$ after a composition of the transformations in the order they are listed

3. **Translation:** $(x, y) \rightarrow (x + 3, y - 5)$
   Reflection: in the y-axis

4. **Translation:** $(x, y) \rightarrow (x - 6, y + 1)$
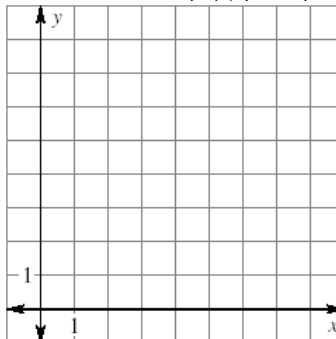   **Reflection:** $90°$ about the origin

Graph $\overline{F''G''}$ after a composition of the transformations in the order they are listed. Then perform the transformations in reverse order. Does the order affect the final image $F''G''$?
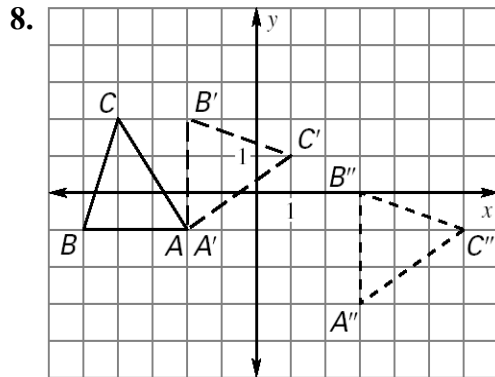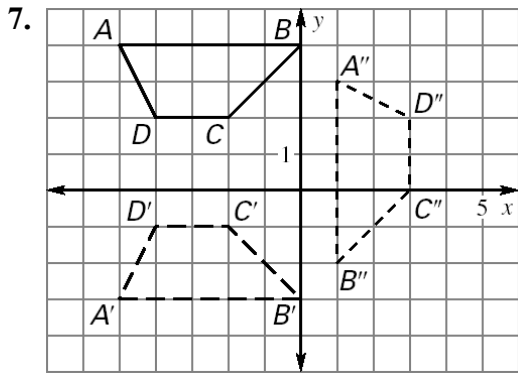
5. $F(4, -4)$, $G(1, -2)$
   Rotation: $90°$ about the origin
   Reflection: in the y-axis

6. $F(-1, -3)$, $G(-4, -2)$
   Reflection: in the line $x = 1$
   Translation: $(x, y) \rightarrow (x + 2, y + 10)$

Describe the composition of transformations.

7.

8.

In the diagram, k‖m, $\overline{AB}$ is reflected in line k, and $\overline{A'B'}$ is reflected in line m.
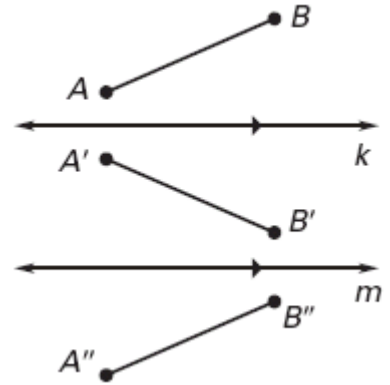
9. A translation maps $\overline{AB}$ onto which segment?

10. Which lines are perpendicular to $\overline{BB'''}$?

11. Name two segments parallel to $\overline{AA'''}$.

12. If the distance between A: and *m* is 2.7 centimeters, what is the length of $\overline{AA'''}$?

13. Is the distance from *A′* to *m* the same as the distance from *A″* to *m*? *Explain.*

Find the angle of rotation that maps *A* onto *A″*.

14.

15.