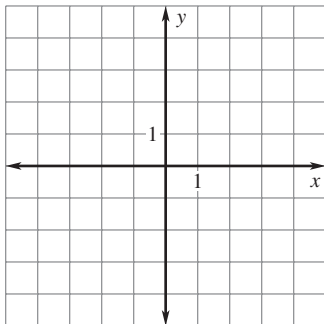


LESSON
9.5**Practice B**

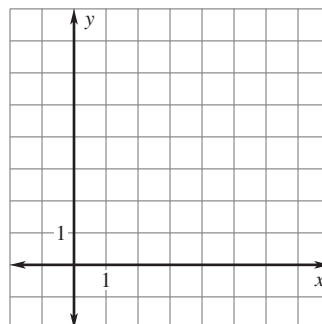
For use with pages 607–615

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

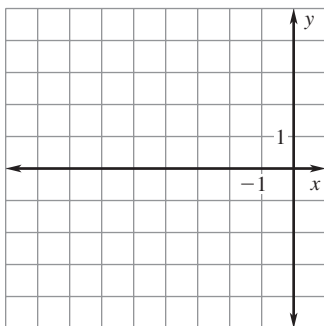


2. Translation: $(x, y) \rightarrow (x, y + 2)$
Reflection: in $y = x$

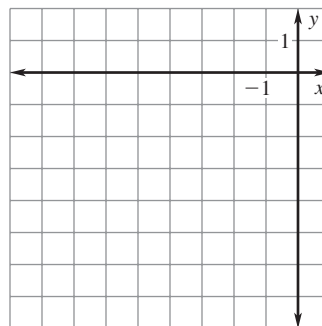


The vertices of $\triangle ABC$ are $A(3, 1)$, $B(1, 5)$, and $C(5, 3)$. Graph the image of $\triangle ABC$ after a composition of the transformations in the order they are listed.

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



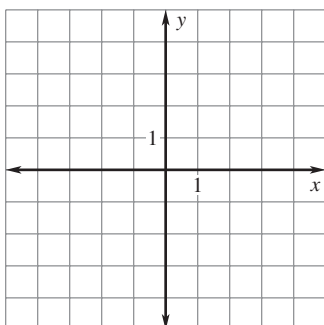
4. Translation: $(x, y) \rightarrow (x - 6, y + 1)$
Rotation: 90° about the origin



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 $\overline{F''G''}$?

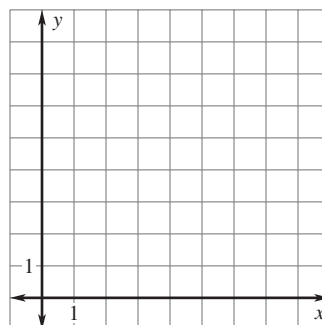
5. $F(4, -4)$, $G(1, -2)$

Rotation: 90° about the origin
Reflection: in the y -axis



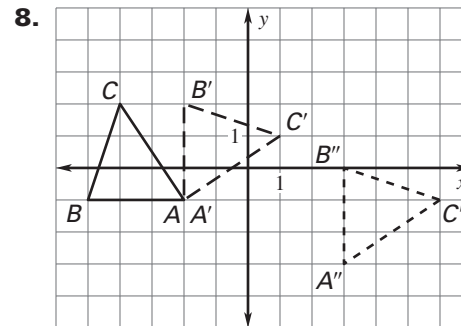
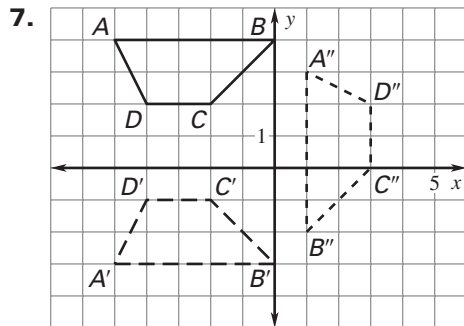
6. $F(-1, -3)$, $G(-4, -2)$

Reflection: in the line $x = 1$
Translation: $(x, y) \rightarrow (x + 2, y + 10)$



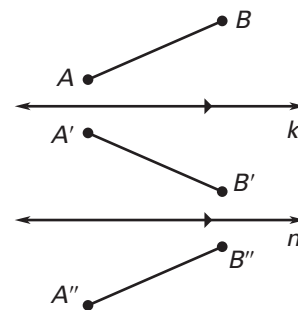
LESSON 9.5 **Practice B** *continued*
For use with pages 607–615

Describe the composition of transformations.

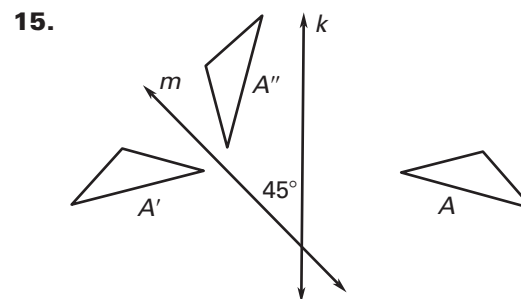
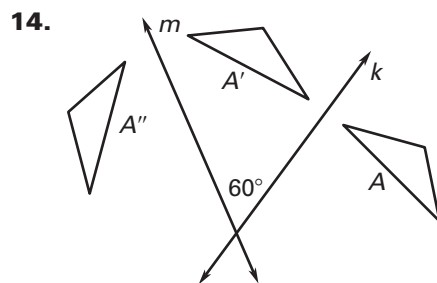


In the diagram, $k \parallel m$, \overline{AB} is reflected in line k , and $\overline{A'B'}$ is reflected in line m .

9. A translation maps \overline{AB} onto which segment?
10. Which lines are perpendicular to $\overleftrightarrow{BB''}$?
11. Name two segments parallel to $\overline{AA''}$.
12. If the distance between k 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'' .



16. **Stenciling a Border** The border pattern below was made with a stencil. Describe how the border was created using one stencil four times.

