

Name _____

Date _____

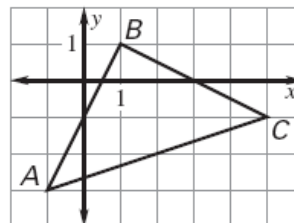
LESSON 9.5

Practice C

For use with pages 607-615

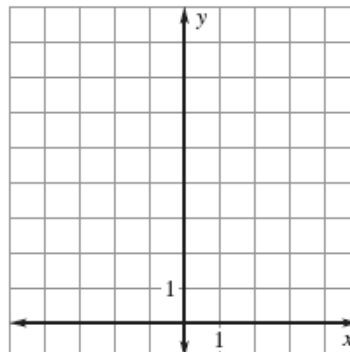
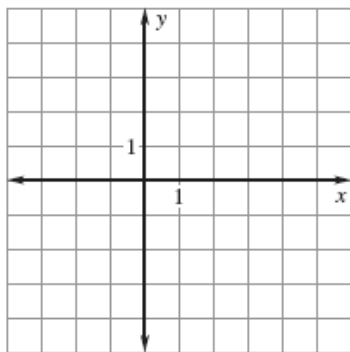
Perform the stated transformations on the preimage, $\triangle ABC$. Give the coordinates of the image, $\triangle A'B'C'$

1. Reflection: in $x = -2$
2. Translation: $(x, y) \rightarrow (x + 6, y + 4)$
3. Rotation: 90° about the origin
4. Translation: $(x, y) \rightarrow (x - 5, y - 4)$
5. Reflection: in the line $y = -x$



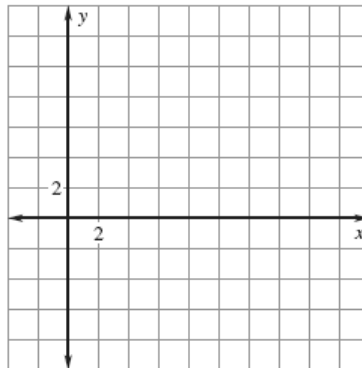
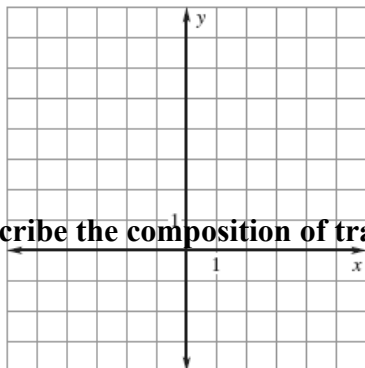
The vertices of $\triangle ABC$ are $A(3, -1)$, $B(7, 1)$, and $C(5, -4)$. Graph the image of $\triangle ABC$ after a composition of the transformations in the order they are listed.

6. Translation: $(x, y) \rightarrow (x - 4, y + 1)$
 7. Translation: $(x, y) \rightarrow (x - 2, y + 3)$
- Reflection: in the line $x = 1$ Rotation: 90° about $(0, 2)$

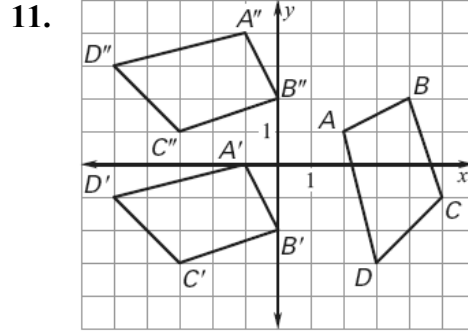
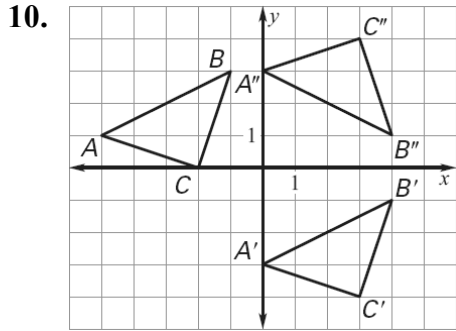


Graph $\overline{F'G'}$ after a composition of the transformations in the order they are listed. Then perform the transformations in reverse order. Does the order affect the final image $\overline{F''G''}$?

8. $F(-2, -1)$, $G(-5, -3)$
 Rotation: 90° about $(-2, 2)$
 Reflection: in the line $y = -1$
9. $F(3, -2)$, $G(6, 1)$
 Reflection: in the line $y = -x$
 Translation: $(x, y) \rightarrow (x + 4, y - 1)$



Describe the composition of transformations.



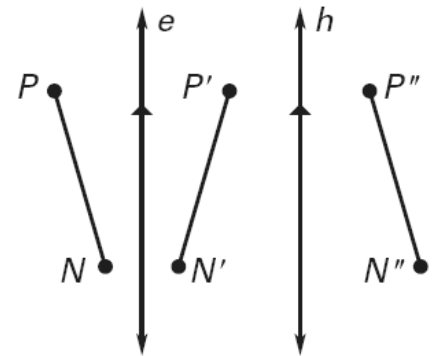
In the diagram, $e \parallel h$, \overline{NP} is reflected in line e , and \overline{NP} is reflected in line h .

12. A translation maps \overline{NP} onto which segment?

13. Which lines are perpendicular to $\overline{PP''}$?

14. Name two segments parallel to $\overline{NN''}$.

15. If the distance between e and h is 1.2 centimeters, what is the length of $\overline{NN''}$?



16. Is the distance from N' to h the same as the distance from N'' to h ? Explain.

Find the angle of rotation that maps A onto A'' .

