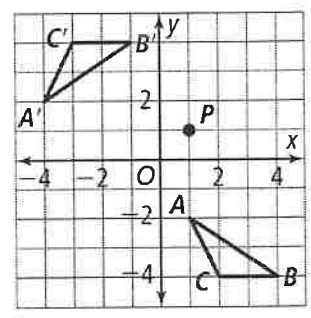


Name \_\_\_\_\_

# 3-4 Additional Practice

## Classification of Rigid Motions

For Exercises 1–5, use the diagram.



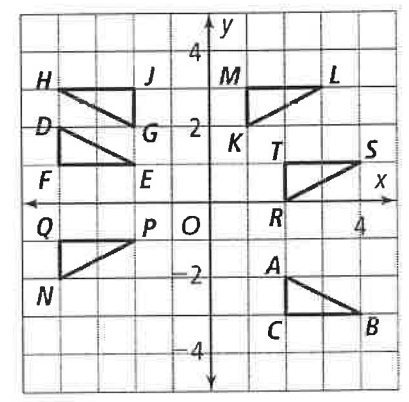
1. What composition of two rigid motions maps  $\triangle ABC$  to  $\triangle A'B'C'$ ?

\_\_\_\_\_

For Exercises 2–5, find the coordinates of  $P'$  under each transformation. Suppose the equation of line  $m$  is  $y = 2$  and the equation of line  $n$  is  $x = -1$ .

2.  $T_{\langle -2, 0 \rangle} \circ R_m$  \_\_\_\_\_
3.  $T_{\langle 0, -5 \rangle} \circ R_n$  \_\_\_\_\_
4.  $T_{\langle 0, 2 \rangle} \circ R_{y\text{-axis}}$  \_\_\_\_\_
5.  $T_{\langle 3, 0 \rangle} \circ R_{x\text{-axis}}$  \_\_\_\_\_

For Exercises 6–12, describe the rigid motion that produces each image.



6.  $\triangle ABC \rightarrow \triangle DEF$  \_\_\_\_\_
7.  $\triangle ABC \rightarrow \triangle GHJ$  \_\_\_\_\_
8.  $\triangle ABC \rightarrow \triangle KLM$  \_\_\_\_\_
9.  $\triangle ABC \rightarrow \triangle NPQ$  \_\_\_\_\_
10.  $\triangle ABC \rightarrow \triangle RST$  \_\_\_\_\_
11.  $\triangle DEF \rightarrow \triangle GHJ$  \_\_\_\_\_
12.  $\triangle GHJ \rightarrow \triangle KLM$  \_\_\_\_\_
13. **Understand** Define the term *glide reflection*.

14. **Apply** The series of footprints can be described as a series of glide reflections. The composition of two identical glide reflections, for example, from the first step to the third, is equivalent to what rigid motion?

