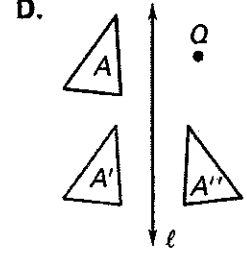
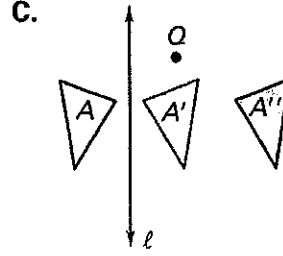
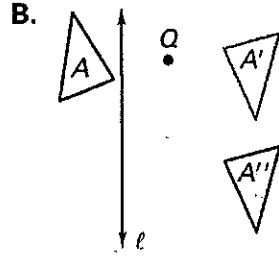
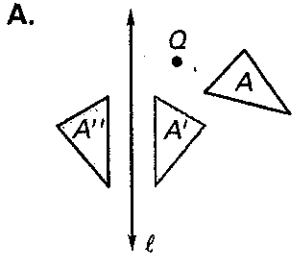


**Practice A**

For use with pages 430-436

Match the composition with the diagram.



1. Translate parallel to  $l$  then reflect in  $l$ .
3. Rotate about  $Q$ , then reflect in  $l$ .

2. Rotate about  $Q$ , then translate parallel to  $l$ .
4. Reflect in  $l$ , then translate perpendicular to  $l$ .

*D*

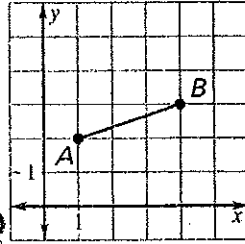
*B*

*A*

*C*

Perform the stated transformation on the preimage,  $\overline{AB}$ . Give the coordinates of the image,  $\overline{A'B'}$ .

5. Reflection: in the  $y$ -axis  $A'(-1,2)$   $B'(-4,3)$
6. Rotation:  $90^\circ$  counterclockwise about the origin  $A'(-2,1)$   $B'(-3,4)$
7. Translation:  $(x, y) \rightarrow (x - 4, y + 3)$   $A'(-3,5)$   $B'(0,6)$
8. Reflection: in  $x = -2$   $A'(-5,2)$   $B'(-8,3)$
9. Rotation:  $180^\circ$  clockwise about the origin  $A'(-1,-2)$   $B'(-4,-3)$
10. Translation:  $(x, y) \rightarrow (x + 5, y - 6)$   $A'(6,-4)$   $B'(9,-3)$

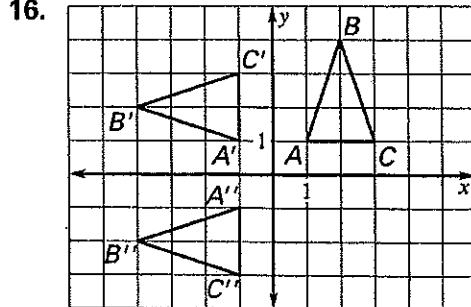
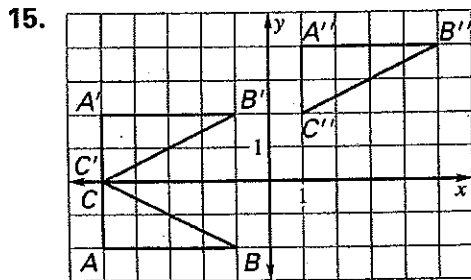


Sketch the image of  $A(1, -3)$  after the described glide reflection.

11. Translation:  $(x, y) \rightarrow (x + 2, y)$   $A''(3, -3)$   
Reflection: in the  $x$ -axis  $A''(3, 3)$
13. Translation:  $(x, y) \rightarrow (x - 3, y + 2)$   $A''(-2, -1)$   
Reflection: in  $x = 2$   $A''(6, -1)$

12. Translation:  $(x, y) \rightarrow (x - 4, y + 3)$   $A''(-3, 4)$   
Reflection: in  $y = 2$   $A''(-3, 4)$
14. Translation:  $(x, y) \rightarrow (x + 5, y - 4)$   $A''(6, -3)$   
Reflection: in  $y = -5$   $A''(6, -3)$

Describe the composition of the transformations.



- Reflect over  $x$ -axis
- Translate  $(x, y) \rightarrow (x + 6, y + 2)$  (right 6, up 2)

- Rotate  $90^\circ$  counter-clockwise about origin
- reflect over  $x$ -axis