Lesson 6-4: Compose Transformations

1. Sample answer: You can compose a transformation of the preimage to its image by applying a sequence of two or more transformations to the preimage until it becomes the image.

2. Sample answer: The preimage and the image are the same figure in the same location with the same orientation.

3. Sample answer: A 90° counterclockwise rotation about the origin, followed by a reflection across the x-axis.

4. Sample answer: A 90° counterclockwise rotation about the origin followed by a translation 6 units down.

5. Sample answer: Rotate the figure 90° about the point Z and then translate it down 6 units and then 4 units to the left.

6. W" (3,-2), X" (6,-2), Y" (6,0), Z" (3,0)

7. 3; 4
   reflection; y-axis

8. E' (0,0), F' (0,5), G' (-4,5), H' (-4,0)

9. Sample answer: A translation 6 units left and 1 unit down, followed by a reflection across the x-axis.

10. Q' (3,-1), R' (2,-2), S' (5,-3)

11. No; Sample answer: You cannot do a glide reflection with a table, because that requires a reflection, which would flip the table upside down.

12. a. C
    b. Sample answer: Reflection across the x-axis, translation 6 units right.

13. a. D
    b. A