

9. [8 points] Let  $h(x) = \frac{4}{3}g(3(x+5)) - 9$ . Write out in words a sequence of transformations that, when applied to the graph of  $h(x)$  result in the graph of  $g(x)$ .

**Note:** You are transforming the graph of  $h(x)$  to the graph of  $g(x)$  here, and **not** the other way around.

In the first blank on each line, write one of the transformations from the list at the end of the problem. In the second blank, write a number that represents the appropriate shift or scaling factor. If you don't need to use all the lines below to write out the transformation, leave any remaining lines blank.

First, \_\_\_\_\_ by \_\_\_\_\_.

Then, \_\_\_\_\_ by \_\_\_\_\_.

Then, \_\_\_\_\_ by \_\_\_\_\_.

Then, \_\_\_\_\_ by \_\_\_\_\_.

List of transformations to choose from for the first blank on each line above:

SHIFT TO THE LEFT	SHIFT UP	STRETCH VERTICALLY	STRETCH HORIZONTALLY
SHIFT TO THE RIGHT	SHIFT DOWN	COMPRESS VERTICALLY	COMPRESS HORIZONTALLY