

## Exercise 199

For the following exercises, use composition to determine which pairs of functions are inverses.

$$f(x) = 8x, g(x) = \frac{x}{8}$$

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### Solution

Take the composition of  $f$  and  $g$  and see if it results in  $x$ .

$$f \circ g = f(g(x)) = f\left(\frac{x}{8}\right) = 8\left(\frac{x}{8}\right) = x$$

Therefore,  $f$  and  $g$  are inverses; they are reflections of one another about the line  $y = x$ .

