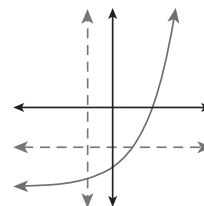Chapter 9 (p. 683, 9-4)

composition of functions

composition of functions: The composition of functions f and g, written as $(f \circ g)(x)$ and defined as $f(g(x))$ uses the output of $g(x)$ as the input for $f(x)$.

If $f(x) = x^2$ and $g(x) = x + 1$, the composite function $(f \circ g)(x) = (x + 1)^2$.
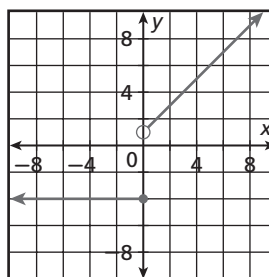

Chapter 9 (p. 691, 9-5)

one-to-one function

one-to-one function: A function in which each y-value corresponds to only one x-value. The inverse of a one-to-one function is also a function.

Chapter 9 (p. 662, 9-2)

piecewise function

piecewise function: A function that is a combination of one or more functions.

$$f(x) = \begin{cases} -4 & \text{if } x \leq 0 \\ x + 1 & \text{if } x > 0 \end{cases}$$

Chapter 9 (p. 663, 9-2)

step function

step function: A piecewise function that is constant over each interval in its domain.