

45.  $F(x) = (x - 9)^5$ . Let  $f(x) = x^5$  and  $g(x) = x - 9$ , then  $F(x) = (f \circ g)(x)$ .

47.  $G(x) = \frac{x^2}{x^2 + 4}$ . Let  $f(x) = \frac{x}{x + 4}$  and  $g(x) = x^2$ , then  $G(x) = (f \circ g)(x)$ .

49.  $H(x) = |1 - x^3|$ . Let  $f(x) = |x|$  and  $g(x) = 1 - x^3$ , then  $H(x) = (f \circ g)(x)$ .

For Exercises 51 and 53 there are several possible solutions, only one of which is shown.

51.  $F(x) = \frac{1}{x^2 + 1}$ . Let  $f(x) = \frac{1}{x}$ ,  $g(x) = x + 1$ , and  $h(x) = x^2$ , then  $F(x) = (f \circ g \circ h)(x)$ .

53.  $G(x) = (4 + \sqrt[3]{x})^9$ . Let  $f(x) = x^9$ ,  $g(x) = 4 + x$ , and  $h(x) = \sqrt[3]{x}$ , then  $G(x) = (f \circ g \circ h)(x)$ .