

46. $F(x) = \sqrt{x+1}$. If $f(x) = x+1$ and $g(x) = \sqrt{x}$, then $F(x) = (f \circ g)(x)$.

48. $G(x) = \frac{1}{x+3}$. If $f(x) = \frac{1}{x}$ and $g(x) = x+3$, then $G(x) = (f \circ g)(x)$.

50. $H(x) = \sqrt{1+\sqrt{x}}$. If $f(x) = \sqrt{1+x}$ and $g(x) = \sqrt{x}$, then $H(x) = (f \circ g)(x)$.

For Exercises 52 and 54 there are several possible solutions only one of which is shown.

52. $F(x) = \sqrt[3]{\sqrt{x}-1}$. If $g(x) = x-1$ and $h(x) = \sqrt{x}$, then $(g \circ h)(x) = \sqrt{x}-1$, and if $f(x) = \sqrt[3]{x}$, then $F(x) = (f \circ g \circ h)(x)$.

54. $G(x) = \frac{2}{(3+\sqrt{x})^2}$. If $g(x) = 3+x$ and $h(x) = \sqrt{x}$, then $(g \circ h)(x) = 3+\sqrt{x}$, and if $f(x) = \frac{2}{x^2}$, then $G(x) = (f \circ g \circ h)(x)$.