Intermediate Algebra Skill
Finding the Inverse of a Square Root Function

Find the inverse of the given function:

1) $f(x) = \sqrt{x}$

2) $f(x) = \sqrt{x} + 1$

3) $f(x) = \sqrt{x-1}$

4) $g(x) = \sqrt{x-1} - 1$

5) $g(x) = \sqrt{x+2} + 1$

6) $g(x) = \dfrac{4 - \sqrt{4x}}{2}$

7) $h(x) = \sqrt{\dfrac{x+1}{2}}$

8) $h(x) = \dfrac{-2 + \sqrt{4x}}{2}$

9) $h(x) = \sqrt{x-3} - 1$

10) $f(x) = \sqrt{-x-1}$

Answers to Finding the Inverse of a Square Root Function

1) $f^{-1}(x) = x^2$

2) $f^{-1}(x) = (x-1)^2$

3) $f^{-1}(x) = x^2 + 1$

4) $g^{-1}(x) = 1 + (x+1)^2$

5) $g^{-1}(x) = -2 + (x-1)^2$

6) $g^{-1}(x) = (2-x)^2$

7) $h^{-1}(x) = -1 + 2x^2$

8) $h^{-1}(x) = (x+1)^2$

9) $h^{-1}(x) = (x+1)^2 + 3$

10) $f^{-1}(x) = -1 - x^2$