Intermediate Algebra Skill

Finding the Inverse of a Reciprocal Function

Find the inverse of the given function:

1) $f(x) = \dfrac{1}{x-1}$

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

3) $f(x) = \dfrac{3}{x+2}$

4) $g(x) = \dfrac{-3}{x} - 3$

5) $g(x) = \dfrac{1}{x+3}$

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

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

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

9) $h(x) = \dfrac{2}{x} - 3$

10) $f(x) = \dfrac{3}{x-3} + 1$

Answers to Finding the Inverse of a Reciprocal Function

1) $f^{-1}(x) = \frac{1}{x} + 1$

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

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

4) $g^{-1}(x) = \frac{3}{-x-3}$

5) $g^{-1}(x) = \frac{1}{x} - 3$

6) $g^{-1}(x) = \frac{4}{x+1} + 1$

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

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

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

10) $f^{-1}(x) = \frac{3}{x-1} + 3$