1. Find $f \circ g$ and $g \circ f$ determine whether each pair of functions f and g are inverses of each other. $f(x) = 3x + 4$ and $g(x) = \dfrac{x-4}{3}$

The following functions are one-to-one. For each function **a.** Find an equation for $f^{-1}(x)$, the inverse function. **b.** Verify that your equation is correct by graphing the two functions in the same window. Use these directions for problems 2-4.
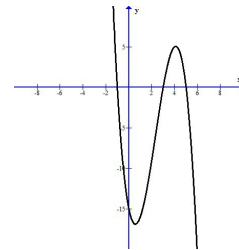
2. $f(x) = 7x - 5$

3. $f(x) = x^3 - 5$

4. $f(x) = \dfrac{3x+1}{x-7}$

5. If the range of f is $[-4, \infty)$ then the domain of f^{-1} is _____.

6. Determine if the function is a one-to-one function. $\{(2,3),(1,0),(7,3),(-9,4)\}$

7. Determine if the graph of the function is a one-to-one function.

8. Use the graph to answer the questions.

a. $g^{-1}(2)$

b. $f^{-1}(2)$

c. $g(2)$

d. $f(4)$