Worksheet 18

1- Assume that the function is one-to-one:

a. If $f^{-1}(4) = 2$, then find $f(2)$.

b. If $f(c) = b$, then find $f^{-1}(b)$.

c. Find $f \circ f^{-1}(337)$.

2- Show that f and g are inverses of each others by verifying that $f(g(x)) = x = g(f(x))$.

a. $f(x) = \frac{x-1}{x+2}$ and $g(x) = \frac{1+2x}{1-x}$.

3- Given the one-to-one function $f(x) = \frac{1-2x}{1+x}$, $x \neq -1$, then find $f^{-1}(x)$.