Second Quiz for Math 30

1. Find the domain, the range and the formula for $f^{-1}$, where

$$f(x) = \frac{2x - 1}{5x + 2}$$

2. Verify that the following is a pair of inverse functions: $f(x) = x^2 + 2x + 1$ with domain $[-1, \infty)$ and $g(x) = \sqrt{x} - 1$.

3. Find the formula for $(f \circ g)(x)$, where

$$f(x) = \frac{2x - 1}{x}, \quad g(x) = \frac{-2}{3x + 1}$$