

- Show all your work for each problem; show enough work to fully justify your answer.
- Simplify all answers as far as possible.

(1) [Points: 20] Let  $f(x) = \frac{3x + 5}{2x + 5}$ .

(a) Find  $f^{-1}(x)$ .

(b) Find  $f'(x)$ .

(c) Find  $\frac{d}{dx}f^{-1}(x)$  in two ways: from (a), and from (b).