

Let  $F(x) = \frac{x}{6x+1}$  Find  $F^{-1}(x)$

$$y = \frac{x}{6x+1}$$

$$x = \frac{y}{6(y)+1}$$

$$x(6y+1) = y$$

$$6xy + x = y$$

$$6y - y = -x$$

$$y(6x-1) = -x$$

$$y = \frac{-x}{6x-1}$$

$$F^{-1}(x) = \frac{-x}{6x-1}$$

$F(x)$  is invertible.