

$$y = \frac{1-10x}{(2x-1)^2}$$

$$u = 1-10x$$

$$\frac{du}{dx} = \frac{d}{dx} 1-10x$$

$$\frac{u}{v} = \frac{u' \cdot v - u \cdot v'}{v^2}$$

$$v = (2x-1)^2$$

$$\frac{dv}{dx} = \frac{d}{dx} (2x-1)^2$$

so,

$$\frac{\frac{d}{dx}(1-10x) \cdot (2x-1)^2 - (1-10x) \cdot \frac{d}{dx}(2x-1)^2}{((2x-1)^2)^2}$$

$$\text{So, } \frac{-10 \cdot (2x-1)^2 - (1-10x) \cdot 4(2x-1)}{(2x-1)^4}$$

$$y = u^2$$

$$\frac{dy}{du} = 2u$$

$$u = 2x-1$$

$$\frac{du}{dx} = 2$$

$$\frac{dy}{dx} = 4u$$

$$= 4(2x-1)$$

$$= \frac{-10(2x-1)^2 - 4(1-10x)(2x-1)}{(2x-1)^4}$$

Simplify

$$\frac{-10}{(2x-1)^2} - \frac{4(1-10x)}{(2x-1)^3}$$

$$\frac{-10(2x-1) - 4(1-10x)}{(2x-1)^3} = \frac{-20x+10-4+40x}{(2x-1)^3}$$

$$\rightarrow \frac{20x+6}{(2x-1)^3} = \frac{2(10x+3)}{(2x-1)^3}$$