84 Find $\frac{d^2y}{dx^2}$ in terms of x and y. $2-8xy = 9x-5y$

$\frac{d}{dx}[2-8xy] = \frac{d}{dx}[9x-5y]$

$-8x\frac{dy}{dx} - 8y = 9 - 5\frac{dy}{dx}$

$(5-8x)\frac{dy}{dx} = 9+8y$

$\frac{dy}{dx} = \frac{9+8y}{5-8x}$

$\frac{d}{dx}\left[\frac{9+8y}{5-8x}\right] =$

$\frac{(5-8x)8y' - (9+8y)(-8)}{(5-8x)^2}$

$= \frac{8(5-8x)(9+8y)}{(5-8x)^2} + \frac{8(9+8y)}{(5-8x)}\frac{(5-8x)}{(5-8x)}$

$= \frac{8(5-8x)(9+8y) + 8(9+8y)(5-8x)}{(5-8x)^3}$

$= \frac{16(9+8y)(5-8x)}{(5-8x)^3}$

$40y - 72x = -8(9x-5y)$

$= -8(2-8xy)$

$= \frac{16(45+40y-72x-64xy)}{(5-8x)^3}$

$= \frac{16(45-8(2-8xy)-64xy}{(5-8x)^3}$

$= \frac{16(45-16+64xy-64xy)}{(5-8x)^3} = \frac{464}{(5-8x)^3}$