14. $\ln(xy) - y^2 + 4x = 3$

$$\frac{d}{dx}[\ln(xy)] + \frac{d}{dx}[-y^2] + \frac{d}{dx}[4x] = \frac{d}{dx}[3]$$

$$\frac{d}{dx}[\ln x] + \frac{d}{dx}[\ln y] + \frac{d}{dx}[-y^2] + \frac{d}{dx}[4x] = \frac{d}{dx}[3]$$

$$\frac{1}{x} + \frac{1}{y} \cdot y' - 2yy' + 4 = 0$$

$$xy\left(\frac{1}{x}\right) + xy\left(\frac{y'}{y}\right) + xy(-2yy') + xy(4) = xy(0)$$

$$y + xy' - 2xy^2y' + 4xy = 0$$

$$xy' - 2xy^2y' = -4xy - y$$

$$y'(x - 2xy^2) = -4xy - y$$

$$y' = \frac{-4xy - y}{x - 2xy^2}$$