

$$(99) \quad x^2 + 3xy + y^3 = 10$$

$$2x + 3x \frac{dy}{dx} + 3y + 3y^2 \frac{dy}{dx} = 0$$

$$(3x + 3y^2) \frac{dy}{dx} = -3y - 2x$$

$$\frac{dy}{dx} = \frac{-3y - 2x}{3x + 3y^2}$$

$$(100) \quad x^2 + 9y^2 - 4x + 3y = 0$$

$$2x + 18y \frac{dy}{dx} - 4 + 3 \frac{dy}{dx} = 0$$

$$\frac{dy}{dx} = \frac{4 - 2x}{18y + 3}$$

$$\frac{dy}{dx} = \frac{2(2 - x)}{3(6y + 1)}$$

$$(101) \quad yx^{1/2} - xy^{1/2} = 16$$

$$y \cdot \frac{1}{2} x^{-1/2} + x^{1/2} \frac{dy}{dx} - \left( x \cdot \frac{1}{2} y^{-1/2} \frac{dy}{dx} + y^{1/2} \cdot 1 \right) = 0$$

$$\frac{y}{2x^{1/2}} + x^{1/2} \frac{dy}{dx} - \frac{x}{2y^{1/2}} \frac{dy}{dx} - y^{1/2} = 0$$

$$\frac{dy}{dx} = \frac{y^{1/2} - \frac{y}{2x^{1/2}}}{x^{1/2} - \frac{x}{2y^{1/2}}}$$

$$\frac{dy}{dx} = \frac{\frac{2x^{1/2}y^{1/2} - y}{2x^{1/2}}}{\frac{2x^{1/2}y^{1/2} - x}{2y^{1/2}}}$$