

$$\frac{\surd}{\square} \quad x^2 = (x+y)(1-y^2) \quad \text{求 } y'(0,1)$$

$$\text{解:} \quad x^2 = x - xy^2 + y - y^3$$

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

$$\Rightarrow 2x = 1 - (y^2 + x2yy') + y' - 3y^2y'$$

$$\Rightarrow 2x - 1 + y^2 = y' - 3y^2y' - 2xyy'$$

$$\Rightarrow 2x - 1 + y^2 = y'(1 - 3y^2 - 2xy)$$

$$\Rightarrow y' = \frac{2x - 1 + y^2}{1 - 3y^2 - 2xy}$$

$$y'(0,1) = \frac{2 \times 0 - 1 + 1^2}{1 - 3 \times 1^2 - 2 \times 0 \times 1} = 0$$