

$$(28) \frac{d}{dx}(\sin^2(3y)) = x + y \quad \left(\frac{2-\pi}{4}, \frac{\pi}{4} \right)$$

$$2 \sin(3y) (\cos 3y) \cdot 3y' = 1 + y'$$

$$2 \sin \frac{3\pi}{4} \cdot \cos \frac{3\pi}{4} \cdot 3y' = 1 + y'$$

$$-3y' = 1 + y'$$

$$-4y' = 1$$

$$y' = -1/4$$

$$\textcircled{16} \frac{d}{dx} (3x^2 + 4y^2 + 3xy = 24)$$

$$\textcircled{a} \quad 6x + 8yy' + 3(xy' + y) = 0$$

$$6x + 8yy' + 3xy' + 3y = 0$$

$$6x + 3y = 0 \quad \textcircled{y = -2x}$$

$$3x^2 + 4(-2x)^2 + 3x(-2x) = 24$$

$$3x^2 + 16x^2 - 6x^2 = 24$$

$$13x^2 = 24 \quad x = \pm \sqrt{\frac{24}{13}}$$