

$$32. \quad x^3 + y^3 - 6xy = 0$$

$$\frac{d}{dx}(x^3 + y^3 - 6xy) = 0$$

$$3x^2 + 3y^2 \frac{dy}{dx} - \left(6y + 6x \frac{dy}{dx}\right) = 0$$

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

$$\frac{dy}{dx} = \frac{6y - 3x^2}{3y^2 - 6x} = \frac{2y - x^2}{y^2 - 2x}$$

$$\text{At } (3, 3): \frac{dy}{dx}(3, 3) = \frac{2 \times 3 - 3^2}{3^2 - 2 \times 3} = -1$$