

(105)

$$x^2 + y^2 = 20$$

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

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

$$\frac{dy}{dx} = \frac{-x}{y}$$

$$@ (2, 4) \quad \frac{dy}{dx} = -\frac{2}{4} = -\frac{1}{2}$$

$$\text{tangent: } (y - 4) = -\frac{1}{2}(x - 2)$$

$$\text{normal: } y - 4 = 2(x - 2)$$