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Expressions for slope at point x1 in application of derivatives

$$m = \tan\theta = f^{|}(x_1) = (\frac{dy}{dx})_{x=x_1}$$

Expression for equation of tangent in application of derivatives

$$y - y_1 = m(x - x_1)$$

Expression for equation on the condition of parallel tangent to the x axis in application of derivative

$$y = y_1$$

Expression for equation on the condition of infinite value of slope as tangent parallel to the y axis in application of derivative

$$x = x_1$$

Expression for equation of normal at application of derivatives

$$y - y_1 = -\frac{1}{m}(x - x_1)$$

Relation of slopes on perpendicular lines at application of derivatives

$$m_1 = \frac{-1}{m_2}$$

Relation of slopes on parallel lines at application of derivatives

$$m_1 = m_2$$

Expression for angles in terms of slope at application of derivatives

$$\tan\phi = \frac{m_1 - m_2}{1 + m_1 m_2}$$