

$$y - (-5) = \frac{-1}{5} (x - (-2))$$

$$y + 5 = \frac{-1}{5} (x + 2)$$

$$5(y + 5) = -x - 2$$

$$5y + 25 = -x - 2$$

$$5y + x + 25 + 2 = 0$$

$5y + x + 27 = 0$ is the equation of the normal

5 $y = \frac{1}{x}$ at the point $(3, \frac{1}{3})$

$$y = x^{-1}$$

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

for the equation of the tangent

$$\frac{dy}{dx} \bigg|_{x=3}$$

$$= -(3)^{-2}$$

$$\therefore m = -\frac{1}{3^2} = -\frac{1}{9} \quad x_1 = 3, y_1 = \frac{1}{3}$$

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

$$y - \frac{1}{3} = -\frac{1}{9} (x - 3)$$