

NO 3

$\therefore 2y - 3x - 2 = 0$ is the equation of the tangent
for the equation of the normal

$$m_1 m_2 = -1$$

$$\frac{3}{2} m_2 = -1$$

$$\frac{3 m_2}{3} = \frac{-2}{3}$$

$$\therefore m_2 = -\frac{2}{3}$$

where $y - y_1 = m(x - x_1)$
 $y - \left(-\frac{1}{2}\right) = -\frac{2}{3}(x - (-1))$

$$\frac{y + \frac{1}{2}}{1} = \frac{-2}{3}(x + 1)$$

$$\frac{2y + 1}{2} = \frac{-2x - 2}{3}$$

$$3(2y + 1) = 2(-2x - 2)$$

$$6y + 3 = -4x - 4$$

$$6y + 4x + 3 + 4 = 0$$

$\therefore 6y + 4x + 7 = 0$ is the equation of the normal