Consider the curve defined by the equation $2y^3 + 6x^2y - 12x^2 + 6y = 1$
with $\dfrac{dy}{dx} = \dfrac{4x - 2xy}{x^2 + y^2 + 1}$

b)   Write an equation of each horizontal tangent to the curve

$\dfrac{dy}{dx} = 0$

$\boxed{4x - 2xy = 0}$

$2x(2 - y) = 0$

$2y^3 + 6y = 1$

$2x = 0 \quad 2 - y = 0$

$\boxed{x = 0}$ and $\boxed{y = 2}$

c)   The line through the origin with slope -1 is tangent to the curve at
point P. Find the x and y-coordinates of P.

$y = -x$

$\dfrac{4x - 2xy}{x^2 + y^2 + 1} = -1$

d)   Find $\dfrac{d^2 y}{dx^2}$ in terms of x and y.