6. Consider the curve given by the equation $y^3 - xy = 2$. It can be shown that $\frac{dy}{dx} = \frac{y}{3y^2 - x}$.

   (a) Write an equation for the line tangent to the curve at the point $(-1, 1)$.

   (b) Find the coordinates of all points on the curve at which the line tangent to the curve at that point is vertical.

   (c) Evaluate $\frac{d^2y}{dx^2}$ at the point on the curve where $x = -1$ and $y = 1$.