1. For each of the following equations and points on the graph of that equation:
   - $x^3 + y^3 - 7x^2y = -7$ at $(-1, 2)$
   - $\tan y = x$ at $\left(\frac{1}{\sqrt{3}}, \frac{\pi}{6}\right)$
   - $e^y = x$ at $(e^3, 3)$
   - $2x \sin(xy) = 1$ at $\left(-\frac{1}{2}, \pi\right)$

   (a) Use implicit differentiation to find $\frac{dy}{dx}$.

   (b) Find a formula for the tangent line to the equation at the indicated point.