Implicit Differentiation Practice

1. Implicitly take the derivative of the following functions

   (a) $x^2 + y^2 = 16$
   (b) $x \ln(y) + y^3 = x$

2. Consider $xy^2 = 1$.

   (a) Implicitly find the derivative of $y$.
   (b) What is the slope of the curve at the point $(1, -1)$?
   (c) What is the equation of the line tangent to the curve at $(1, -1)$?