Implicit Differentiation Practice

1. Implicitly take the derivative of the following functions. Solve for y' if feasible.

   (a) $x^2 + y^2 = 16$

   (b) $x^2 y + y^3 = x$

2. Consider $xy^2 = 1$.

   (a) Implicitly find the derivative of y.

   (b) What does a plot of this "function" look like?

   (c) What is the slope of the curve at the point $(1, -1)$?

   (d) What is the slope of the curve at the point $(1, 1)$?