1. Do the following for each curve below.

   - Use implicit differentiation to compute $\frac{dy}{dx}$.
   - Find $\frac{dx}{dy}$.
   - Identify any points (x, y) on the curve where your formulas for $\frac{dy}{dx}$ and $\frac{dx}{dy}$ both evaluate to $\frac{0}{0}$. Your formulas are invalid at these points.
   - For what values of x and y is the slope of the curve positive?
   - When is the tangent line horizontal?
   - When is the tangent line vertical?
   - Match your curve to one of the graphs at the bottom of the page. Check that the graph satisfies all the properties above.

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

   (b) $x^4 = x^2 - y^2$

   (c) $x^{2/3} + y^{2/3} = 1$