1. Match the differential equation with its direction field.
   a) \( y' = xy \)     
   b) \( y' = 1 + xy \)  
   c) \( y' = x(1 - xy) \) 
   d) \( y' = y(1 - xy) \)
2. Find a solution to the differential equation $y' = xy$ satisfying the condition $y(0) = -1$. Use the direction field of $y' = xy$ on the front of the page to sketch $y(x)$.

3. Find a solution to the following differential equation: $\frac{x^2}{y^2} + \frac{\sqrt{x^3 + 4}}{y^5} \frac{dy}{dx} = 0$. You may ask for a hint.