2. [12 points]
   a. [6 points] Each the following is the graph of an implicit function.

   ![Graph I](image1)
   ![Graph II](image2)
   ![Graph III](image3)

Match each of the graphs above to the formula below that gives the slope at each point on the graph.

(A) \[ \frac{dy}{dx} = \frac{3x^2}{2y}, \]
(B) \[ \frac{dy}{dx} = \frac{(x - 1)(x + 2)}{2y}, \]
(C) \[ \frac{dy}{dx} = \frac{x^2 - 1}{2y}, \]
(D) \[ \frac{dy}{dx} = \frac{(y - 1)(y + 2)}{2x}. \]

You do not need to show work in this part.

**Answers:** Graph I: ________, Graph II: ________, Graph III: ________
b. [6 points] Find \( \frac{dy}{dx} \) for the implicit function given by

\[ 2^x + y + \sin(x) \cos(y) = 5 - x. \]

Show all your work carefully to receive full credit.

Answer: \[ \frac{dy}{dx} = \]