

DATE: _____

1. Write the equation(s) of the tangent line(s) for $x^2 - y^2 = 3x$ at $x = -1$.
2. Prove that the slope of the tangent line at $(1,2)$ is -3 for $x^2 - 4xy + y = 3x - 8$.
3. Find the value of $\left. \frac{d^2y}{dx^2} \right|_{(1,2)}$ for the given equation $x^2 - 4xy + y = 3x - 8$.