Name: _____

Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise. If you finish early, you may leave with my approval.

1. (*0 points*) Find the equation of the line tangent and the line normal to $y^2 - xy = 3x^3y^4 + x^2 + 4$ at the point $(0, 2)$

2. (*0 points*) One car leaves a given point and travels north at 30 mph. Another car leaves the same point at the same time and travels west at 40 mph. At what rate is the distance between the two cars changing at the instant when the cars have traveled 2 hours?