

Name _____

Homework 11
Section 3.7

1. (5) Find the equation of the tangent line to $\ln(xy) = 2x$ at $(1, e^2)$.

2. (5) Given the equation $\tan^{-1}\left(\frac{y}{x}\right) = xy$, compute $\frac{dy}{dx}$.

3. (5) Find $\frac{dq}{dr}$ for $q = r^2 \sin q + r$.

4. (5) Find the slope of the tangent line to the curve $y^2 = \frac{x^2}{xy - 4}$ at the point $(4, 2)$.