

Calculus II - Quiz 3

Please show all your work! Answers without supporting work will not be given credit. Simplify answers wherever possible.

- (1) (10 points) Find $\frac{\partial}{\partial x}$ of the following functions:
- (a) $\frac{y}{x^2+2}$
 - (b) $\ln(xy + x - y)$
 - (c) $(\sin(x - y))^{5/3}$
 - (d) $\tan(x^2 - y^2)$
 - (e) xye^{-xy}
- (2) (10 points) Find an approximate value of $\ln(1.1^2 - 0.1)$.
- (3) (10 points) Find max/min of $x + y$ on the curve $x^2 + 2y^2 = 6$.
- (4) (10 points) Find all the local extrema of e^{xy} and classify them.