

Name: _____

MA 2310: Quiz 4

Show all work for credit.

1. Compute the derivative from the formulae and use product rule, quotient rule and chain rule.

(a) $f(x) = 5\sqrt{x} \sin(x)$

(b) $f(x) = 4 \ln(x) \sec(x)$

(c) $f(x) = \ln(x^2 + 1)$

(d) $f(x) = (x - 1)^4(3x + 2)^3$

(e) $f(x) = \frac{x}{\sqrt{x+4}}$

(f) $f(x) = \frac{e^x}{1+e^x}$

2. Compute the derivative using implicit differentiation.

(a) $x^3 + y^3 = 2x + 5$

(b) $x^3y^3 = 2x + 5$