

Math 108H (Quiz 2)

Name _____.

Show all work (no calculator)

1. (15 points) Find the derivative function of each of the following:

(a) $f(x) = \frac{x^2-2}{x^2+2}$

(b) $g(x) = 3x^5 + 2x\sqrt{x}$

(c) $h(x) = \tan x + \frac{5}{x^2}$

(d) $k(x) = (x^2 + 5x + 19) \sec x$

(e) $p(x) = \sin(2x)$

2. (5 points) Find an equation of the tangent line to the curve $y = x \cos x$ at $x = \frac{\pi}{4}$.