MATH 110-001 QUIZ 5

November 17, 2017
Time: 15 minutes

Show all your work. No calculators, no books/notes are allowed.

Name (please print): _____
Student number: _____

1. Find the derivative, $f'(x)$, of the following functions. Do not simplify.

$f(x) = \sqrt[3]{1 + tan(x)}$

$f(x) = sin^2(e^{sin^2 x})$

3. Find an equation of the tangent line to the curve

$$y = \frac{2}{1 + e^{-x}}$$

at the point $x = 0$

Bonus: If $F(x) = f(xf(xf(x)))$, where $f(1) = 2$, $f(2) = 3$, $f'(1) = 4$, $f'(2) = 5$, $f'(3) = 6$, find $F'(1)$.