

MATH 110-001 QUIZ 4

November 03, 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

$$f(x) = x^{\frac{5}{2}}e^x$$

$$f(x) = \frac{x^2}{4 + 3e^x}$$

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

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

at the point $x = 1$

Bonus: Suppose that $f(2) = -3$, $g(2) = 4$, $f'(2) = -2$, and $g'(2) = 7$, and

$$h(x) = \frac{g(x)}{1 + f(x)}$$

Find $h'(2)$.