

Name: \_\_\_\_\_

Math 152 Calculus II – Crawford

Quiz 1

11 September 2018

Books, notes (in any form), and calculators are not allowed. *Show all your work.* Good Luck!

1. (3 pts) Solve the following equation for  $x$ .

$$3e^{2x-4} = 8$$

2. (7 pts) Differentiate the following. [Do not simplify.]

(a).  $f(x) = e^{-2x} \cos(4x)$

(b).  $y = 3^{x^3}$

3. (4 pts) Evaluate the following integral.

$$\int \frac{e^{5x}}{(1 + e^{5x})^2} dx$$

4. (1 pts) True or False: If  $y = (\tan x)^x$ , then  $y' = x(\tan x)^{x-1}$