

IVA'S CALCULUS I: Homework based on Mon 2/24 lecture

Purpose

The main purpose of this assignment is to have you practice THE QUOTIENT RULE. In your textbook this rule is explained in Section 2.4.

Due date

WEDNESDAY 2/26/2014, by 5pm.

Problems

Compute the derivatives of the following. Please attempt to simplify as far as possible.

1. $f(x) = \frac{2x+1}{3x-1}$;

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

3. $f(x) = \frac{x}{x^2+1}$;

4. $f(x) = \ln\left(\frac{x+1}{x-1}\right)$;

5. $f(x) = \tan(x) = \frac{\sin(x)}{\cos(x)}$;

6. $f(x) = \cot(x) = \frac{\cos(x)}{\sin(x)}$;

7. $f(x) = \frac{\sin(x)+\cos(x)}{\sin(x)-\cos(x)}$.