Monday, October 22

Reading: *Anton, Bivens & Davis* Section 3.8

Class 20: Local Linear Approximations

We shall learn a very practical application of derivatives, the computation of differentials and the locally linear approximation of a function sometimes known as "the microscope approximation."

Homework 20:

Anton, Bivens & Davis §3.8: 1, 4, 5, 6, 7, 8, 28, 31, 43, 45, 46

Wednesday, October 24

Reading: *Anton, Bivens & Davis* Section 4.1

Class 21: Implicit Differentiation

We shall learn *another* application of the Chain Rule, this time how to differentiate functions which are implicitly defined, i.e. where $f(x,y) = c$ so $y(x)$ is impossible to write down explicitly but $y'(x)$ can still be obtained.

Homework 21:

Anton, Bivens & Davis Chapter 3 Review: 2, 3, 10, 11, 23, 24, 29, 43

Thursday, October 25

Lab 9: Lab write-up of "Limits, Continuity and Differentiability" due today. Quiz 7 will be given in lab today.

Homework 19, 20 & 21 Due in the Math 110 Course Box by 5:00 pm Thursday October 25

Friday, October 26

Reading: *Anton, Bivens & Davis* Section 4.2

Class 22: Differentiation of Logarithm Functions

We shall discover the derivative of the logarithmic function and learn the technique of logarithmic differentiation which will allow us to prove that the Power Rule applies for all real numbers, i.e. $(x^r)' = rx^{r-1}$.

Homework 22:

Anton, Bivens & Davis §**4.1**: 1, 4, 5, 6, 9, 14, 16, 17, 31 §**4.2**: 4, 5, 10, 19, 20, 35

NEW! Deadline for Term Project Proposals: 5pm Friday October 26th