

Math 273 - Fall 2016

Homework 5

Due October 13, 2016

The test of a first-rate intelligence is the ability to hold two opposed ideas in mind at the same time and still retain the ability to function.

—F. Scott Fitzgerald

Turn in:

- (1) (a) Find the two points at which the curve $y = \frac{x}{1+x^2}$ has horizontal tangent line. (In other words, where the slope of the tangent line is zero.)
- (b) Show that there is a point in the interval $(0, 1)$ at which the function $\frac{x}{1+x^2}$ and its derivative are equal.

From the textbook: 3.2.18, 3.2.22, 3.3.12, 3.3.16, 3.4.10, 3.4.22.

Recommended (Not to turn in)

3.2.4 3.2.8, 3.2.23, 3.3.5, 3.3.14, 3.3.6, 3.3.13, 3.3.24, 3.3.28, 3.3.61. 3.4.16.