Homework 10

Math 147 (section 501–502–503), Spring 2015

This homework is due on Wednesday, April 1.

0. Read Sections 5.2 and 5.3. After reading these sections, you should be able to answer the following question (which is *not* to be turned in): what are horizontal, vertical, and oblique asympototes?

1. Find all global maxima and global minima of the following functions:

   (a) $f(x) = \frac{3x^2}{x+1}$ with domain $[-0.5, 4]$

   (b) $f(x) = x - 2\cos x$ with domain $[0, \pi]$

   (c) $f(x) = |x^2 - 1|$ with domain $[-5, 4]$

   (d) $f(x) = (x+5)^2$ with domain $(-\infty, \infty)$

   (e) $f(x) = (x+5)^2$ with domain $(-5, \infty)$

   (f) $f(x) = (x+5)^2$ with domain $(-6, -5]$

2. Section 5.2 # 14, 20, 28, 44

3. Section 5.3 # 4, 12, 26, 30, 36

4. (These problems are *not* to be turned in!)

   (a) Section 5.1 # 31, 33

   (b) Section 5.2 # 5, 9, 11, 13, 15, 19, 27

   (c) ection 5.3 # 5, 7, 17, 21, 25, 27, 29, 31, 33, 37, 39