Calculus 1   Assignment 1   Fall 2013

1. From Guichard Section 1.3:

   (a) A box with a square base and no top has a volume of 100 cubic inches. If x is its height, determine the surface area of the box as a function of x. What is the domain of this function?

   (b) Find the domain of the function

   $$f(x) = \frac{\sqrt[3]{x} - x^2}{\sqrt{x - 1}}.$$

2. From Guichard Section 1.4: Problem 14

3. From Strang Section 1.5: 14, 24, 36