Math 1450, Honor Calculus Practice7, Fall 2015.

November 4, 2015

PSID: _____ Name: _____

1. Given an equation of ellipse

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

   (a) Find the area enclosed by the given ellipse.

   (b) Find the volume of solid obtained by rotating bounded by the given ellipse about y-axis.

2. (a) Calculate $\int_0^1 \tan^{-1} x \, dx$.

   (b) Gvien $y = \tan^{-1} x$, $y = 0$, $x = 1$. Find the volume of the solid by rotating the region bounded by the given three curves about y-axis.