Math 2315 - Calculus II

Homework #4 - 2007.09.12

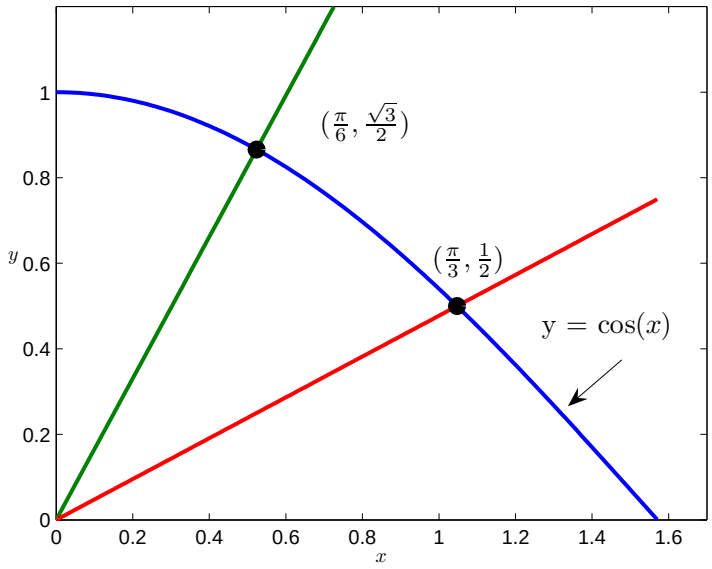
Due Date - 2007.09.19

Name: _____

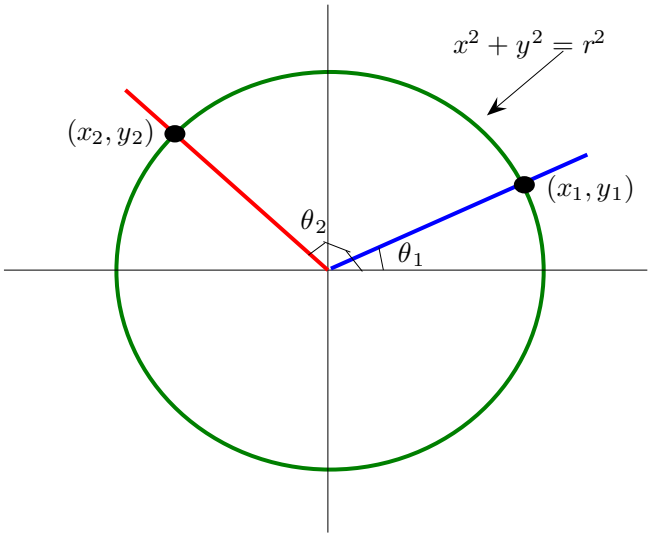
Part 1: Problems from sections 6.1.

Part 2: The *fun* problems.

1. Find the area between the curve $y = \cos(x)$ and the two lines depicted below.



2. Find the area of the circle of radius r between the two lines defined by the angles θ_1 and θ_2 which are measured from the positive $x-$axis. Here you may assume that $0 < \theta_1 < \frac{\pi}{2}$ and $\frac{\pi}{2} < \theta_2 < \pi$.



3. Find the value of c such that the area between the curves $y_1 = x(a - x)$ (with $a > 0$) and $y_2 = cx$ is exactly one half of the area between y_1 and the $x-$axis.