King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 201 - Quiz 1

Name:
Student ID #:

Question 1. Consider the parametric curve

$$x = \cos(t) + \sin(t),\ y = \cos(t) - \sin(t),\ 0 \leq t \leq \pi.$$

(1) Eliminate the parameter to find the cartesian equation of the curve.
(2) Sketch the curve and indicate with an arrow the direction in which the curve is traced as the parameter increases.

QUESTIONS 2 IS ON THE BACK OF THE PAGE.

Question 2. Find the equation of the tangent line to the parametric curve $x = \tan(\theta),\ y = \sec(\theta)$ at the point $(\sqrt{3}, 2)$.