KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS
DEPARTMENT OF MATHEMATICS AND STATISTICS
MATH 201 - QUIZ 1

Name:
Student ID #:

Question 1. Consider the curve given by the parametric equations

$$x = t + 1 \quad y = \sqrt{1 - t^2}, \quad -1 \leq t \leq 0.$$

a) By finding its Cartesian equation, identify the path of the particle whose motion is described by the parametric equations.
b) Sketch the portion of the path traced by the particle with the direction of motion.
c) Calculate the surface area obtained by revolving the curve about the x-axis.

Question 2. Replace the polar equation $\sin(2\theta) = 1/4$ by equivalent Cartesian equation.

Your Solution.