King Fahd University of Petroleum & Minerals		
	Faculty of Science	
	Math Department	
	Math 260 Quiz # 1	2/28/05
Name:	ST. ID #:	

1) Verify that the equation $y = \frac{1}{x} - \ln x$ is a solution of differential equation $x^2 y'' + xy' - y = \ln x$

2) Find a function y = f(x) that satisfy the differential equation $y' = \cos 2x$ where y(0) = 1

3) Find the position function x(t) of a moving particle given $a(t) = \frac{1}{\sqrt{t+4}} \& v_0 = -1 \& \chi_0 = 1$

4) Find a general solution (implicit or explicit) of the differential equation $2y = \frac{dy}{dx}(1-x^2)$

5) Find a particular solution of the differential equation $(x^2 + 1)y' - 3xy = x$, y(0) = 1

6) Explain what do we mean by a singular solution.