King Fahd University Of Petroleum and Minerals
College of Sciences
Mathematics and Statistics Department
Math 202-07
Quiz#1

Name:..... ID#:..... Serial#:.....

1. Verify that $y(x) = \ln(x + C)$ satisfy the differential equation $e^y y' = 1$, Then determine the value of the constant C such that $y(x)$ satisfy the initial condition $y(0) = 0$.

2. Solve the following differential equations:

   (a) $\frac{dy}{dx} = x\sqrt{x^2 + 9}$.

(b) $(\tan x)\frac{dy}{dx} = y$, $y(\frac{1}{2}\pi) = \frac{1}{2}\pi$.

(c) $xy' + 3y = 2x^5$, $y(2) = 1$.