Quiz No: 2 Math 202 Name: _____Section_____ID_____

Q1. Find an integrating factor of $\cos x\,dx + \sin x(1+2y^{-1})dy = 0.$ (Do not solve the equation)

Q2. Solve the exact differential equation $xy^2dx + yx^2dy = 0$.

Q3. Use an appropriate substitution to convert the equation $dy/dx + (\sin x)\,y = (\cos x)\,y^{-3}$.

Q4. Write a differential equation that represents Newton's law of cooling. Solve this differential equation.