QUIZ 1 MATH 260 NAME_____ID_____SECTION_____

Q1. Find a function $y(x)$ that satisfies the initial value problem $\frac{dy}{dx} = \frac{1}{\sqrt{1-x^2}}$; $y(1) = 2$.

Q2. Solve the IVP $\frac{dy}{dx} = xy$, with y (0) = -2

Q4. Initially a city had a population of 25000. After 10 years, the population became 75000. Assuming that the city population growth satisfies $\frac{dP}{dt} = kP$, what will be the population after year 20 years?