Math 1B 223 DIS Quiz 7

18 Apr 2019

Name: _____ Score: _____

1. (a) Find the general solution of the differential equation $\frac{dy}{dx} + y^2 \cos x = 0$. (3 points)

   (b) Find the solution in part (a) that satisfies the initial condition $y(0) = \frac{1}{2}$ (1 point)

2. Solve the following initial value problems. (3 points each)

(a) $y' + (\tan x)y = \cos^2 x, -\frac{\pi}{2} < x < \frac{\pi}{2}, y(0) = 0$

(b) $x^2y' + 3xy = \sqrt{1+x^2}, x > 0, y(1) = 0$