

MATH 162 EXAM 2, Spring 2009

Show work! No work, no credit.		Name:	Score	
1.	a) Show that $y = 1/\sqrt{c-x^2}$ is a solution of $y' = xy^3$.	b) Find the solution with I.C. $y(0) = 2$	1	
			2	
			3	
			4	
			5	
			6	
Ans:_____.				
2.	Solve the differential equation $(1+x^2)y' = xy$, $y(0) = 1$.		7	
			8	
			9	
			10	
			Tot	
Ans:_____.				
3.	Use Euler's method with step size $h = 0.1$ to estimate of $y(0.3)$, where y is the solution of: $y' = y + xy$, $y(0) = 1$.			
Ans:_____.				
4.	Solve the linear equation: $x^2y' + xy = 1$, $y(1) = 2$.			
y(t)=_____.				
5.	Draw a qualitative graph of the solution of $P' = 1.8P(1 - \frac{P}{2400})$ with the given condition: a) $P(0) = 100$.	b) Does the solution have an inflection point? Explain!		
Extra Space				

