

MATH 261 EXAM 3, Spring 2021

Simplify all answers. Show your work!		Name:	Score		
1.	a) Find $\int \int_R ye^{xy} dydx$; $R = [0, 2] \times [0, 2]$. Ans:_____.	b) Find $\int_0^2 \int_0^1 x/(y^2 + 1) dydx$ Ans:_____.	1		
			2		
			3		
			4		
			5		
			6		
2.	Find the volume in the first octant bounded by $z = 9 - y^2$ and $y = x$. a) Set up the integral. Ans:_____.	b) Evaluate the integral. Ans:_____.	7		
			8		
			9		
			10		
			Tot		
3.	Let $I = \int_0^1 \int_{x^2}^1 x^3 e^{y^3} dydx$. a) Reverse the order of integration. Ans:_____.	b) Compute the integral. Ans:_____.			
4.	Let $I = \int \int_D xy dydx$, where D is the region bounded by $x = \sqrt{4 - y^2}$ and $x = 0$. a) Convert to polar coordinates. Ans:_____.	b) Evaluate the integral. Ans:_____.			
5.	Convert the equation of the surface $z = \sqrt{3}r$ to: a) Cartesian Coordinates. Ans:_____.	b) Spherical coordinates. Ans:_____.			
Extra Space					

