MA 227-103 — Summer 2017 — Dr. Clontz

Name:	Exercise T	ype:
J#:	Quiz	
Date: 2017 June 22		
Standard: This student is able to		Mark:
C05: MulivarCalc. Compute and apply the partial derivatives, gradient, and directional derivatives of a multivariable	-	
real-valued function. $4/4$ * reat	tempt due on:	

Verify the mixed derivative theorem $f_{xz} = f_{zx}$ for $f(x, y, z) = 2yz - 3x^2z$ by computing the second partial derivative both ways.

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Date: 2017 June 22		
Standard: This student is able to C06: ChainRule. Apply the multivariable Chain Rule to compute derivatives and find normal vectors.		Mark:
2/4 * reat	tempt due on:	

Find the normal vector to the surface $ze^x + 5xy = yz - 3$ at the point (0, 2, 3).

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Name:	Exercise T	ype:
J#:	Quiz	
Date: 2017 June 22		
Standard: This student is able to S06: Lineariz. Compute the linearization of a two-variable real-valued function at a point and use it for approximation.		Mark:
1/3 * reatt	tempt due on:	

Find the linearization L(x,y) for $f(x,y)=2x+y\sqrt{x}$ at the point $\langle 4,-2\rangle$. Then use it to show that $f(3.9,-1.9)\approx 4.05$.