Math 225: Calculus III
Quiz 5 Feb. 27/29, 1996

Name:
Section:

1. Find the equation of the plane tangent to the surface $z=y^{3}-x y^{2}+x^{2}$ at the point $(3,2,5)$.
2. Determine the direction in which the function $f(x, y, z)=x^{2} y z^{3}-x+y^{2}$ increases most rapidly at the point $(1,2,1)$ and calculate the derivative of $f(x, y, z)$ at $(1,2,1)$ in this direction.
