

Name _____

Mathematics 206a: Multivariable Calculus
Fall Semester 2005

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Quiz #34

November 18

Given the vector field $\mathbf{F}(x, y, z) = (y^2, 2xy, 2z)$,

prove that \mathbf{F} is path independent on \mathfrak{R}^3 by finding a potential function for \mathbf{F} .