

MATH 251: Practice 21

July 2, 2015

Name: _____

1. Compute the vector line integral of $\vec{F} = \langle y, x, z \rangle$ along the curve $\vec{c}(t) = \langle t, t^2, t^3 \rangle$ from $t = 0$ to $t = 2$.

2. Find a potential function for $\vec{F} = \langle 2xy + \sin(z), x^2 + e^y, x \cos(z) + z^2 \rangle$, if it exists.