

Name: _____

Math 233: Multivariate Calculus (Sect 13)

Instructor: Jennifer Li

Wednesday, December 12, 2018

Quiz 13

Please write neatly and show all of your work.

1. Evaluate the line integral

$$\int_C (x + 2y) dx + x^2 dy,$$

where C is the line segment from $(2, 1)$ to $(3, 0)$.

2. Is $\mathbf{F}(x, y) = (ye^x + \sin y) \mathbf{i} + (e^x + x \cos y) \mathbf{j}$, which has domain $D = \mathbb{R}^2$, a conservative vector field? (“Yes” or “No” alone is not an acceptable answer; you must show your work).

3. State Green’s Theorem.