

"QUIZ" for Lecture 18

NAME: (print!) Daniel Gameiro Section: 23

E-MAIL SCANNED .pdf OF COMPLETED QUIZ to DrZcalc3@gmail.com (Attachment: q18FirstLast.pdf) ASAP BUT NO LATER THAN Nov. 9, 8:00pm

1. Let C be the line segment from $(0, 1)$ to $(2, 3)$, find $\int_C xy \, ds$.

$$x(t) = 2t \quad y(t) = 1 + 2t \quad ds = \sqrt{8} \, dt$$

$$\int_0^1 (2t)(1+2t) \cdot \sqrt{8} \, dt = \frac{14\sqrt{2}}{3}$$

2. Evaluate

$$\int_C xy^2 \, dx + x^2y \, dy,$$

where C is $x = t^2, y = t^3, 0 \leq t \leq 1$.

$$\int_0^1 (t^2(t^3)^2 \cdot 2t + (t^2)^2 t^3 \cdot 3t^2) \, dt =$$

$$\int_0^1 5t^9 \, dt = \frac{1}{2}$$